Partnership for Good Governance პარტნიორობა კარგი მმართველობისთვის ევროკავშირი საქართველოსთვის The European Union for Georgia

Pre-feasibility study on Inter-Municipal Cooperation for Solid Waste Management in Adjaria

Prepared by:

Alba Dakoli Wilson

May 2017

Centre of Expertise For Local Government Reform





GEORGIA

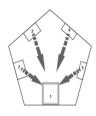
Pre-feasibility study on Inter-Municipal Cooperation for Solid Waste Management in Adjaria

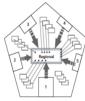
May 2017

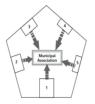
Programmatic Cooperation Framework for Armenia, Azerbaijan, Georgia, Republic of Moldova, Ukraine and Belarus, implemented by the Council of Europe, funded by the European Union and the Council of Europe























ACRONYMS AND ABBREVIATIONS

ATA Achara Tskali Alliance

CENN Caucasus Environmental NGO Network

CIPDD Caucasus Institute for Peace, Democracy and Development

CoE Council of Europe

EAWM Ecological Awareness and Waste Management
EBRD European Bank for Reconstruction and Development

EHS Environmental Health and Safety
EIA Environmental Impact Assessment

ESIA Environmental and Social Impact Assessment

EU European Union

FLAG Foundation for Local Autonomy and Governance

GEL Georgian currency HR Human Resources

ICMA International City/County Management Association

IMC Inter-Municipal Cooperation

IOM International Organisation for Migration
 IPPC Integrated Pollution Prevention and Control
 IWMS Integrated Waste Management System

JSC Joint Stock Company

KfW Kreditanstalt für Wiederaufbau

KP Kommandit Partnership LLC Limited Liability Company

MENRP Ministry of Environment and Natural Resources Protection

NALAG National Association of Local Authorities

NGO Non-Governmental Organisation NPO Not-for-Profit Organisation

NW North-west

OHS Occupational Health and Safety PPP Public-Private Partnership

SIDA Swedish International Development Agency

SLC Solidary Liability Company







SWM Solid Waste Management

SWMC Solid Waste Management Company
TRACECA transport corridor Europe—Caucasus—Asia
UNDP United Nations Development Programme

UNFCCC United Nations Framework Convention on Climate Change USAID United States Agency for International Development

WMTR Waste Management Technologies in Regions







This report is prepared within the Programmatic Cooperation Framework for Armenia, Azerbaijan, Georgia, Republic of Moldova, Ukraine and Belarus, implemented by the Council of Europe, funded by the European Union and the Council of Europe.

Acknowledgements

Pre-feasibility study on Inter-Municipal Cooperation for Solid Waste Management in Adjaria represents the analysis of opportunities and challenges, leading towards recommendations for stimulating IMC in the Adjaria Region, and consolidating IMC examples for Georgia.

The contribution of the Ministry of Regional Development and Infrastructure, the municipalities of Keda, Shuakhevi and Khulo in particular, and the support of the Adjaria Regional Government have been indispensable.

This Council of Europe IMC pre-feasibility study was prepared by Alba Dakoli Wilson and Iain Wilson, FLAG, with contributions from the local team of experts coordinated by Tiko Tkeshelashvili, CIPDD, and the continuous support of Gennadiy Kosyak and Sergiu Tatarov.



Table of Contents

1	Executive Summary	6
2	Introduction	9 10
3	Review of current situation. 3.1 Area covered and impacted by project. 3.2 Community profiles. 3.2.1 Topography and climate. 3.2.2 Demography. 3.3 Current situation of SWM in Adjaria. 3.4 Organisational structure of solid waste management system. 3.5 Current technical set-up: existing and proposed landfills, fly-dumps, transfer stations	11 12 12 14 16
4 sa	Environmental and social legal and institutional environment including a master plan faitary landfills in Georgia 4.1 Solid waste collection and management 4.2 Environmental and Social Impact Assessments 4.3 Inter-municipal cooperation 4.4 EU and other international requirements	20 20 22
5	Situation analysis of Inter-Municipal Cooperation in Georgia and in Adjaria	26 27
6	Stakeholder analysis of proposed SWM IMC 6.1 Customers: households and businesses 6.2 Local authorities 6.3 Regional authorities 6.4 Donors and international consultants 6.5 Central authorities 6.6 Local organisations, NGOs and CSOs 6.7 Enterprises 6.8 Secondary stakeholders	29 29 30 31 31
7	Alternatives to resolving the challenge of SWM in Adjaria	36 36 36







39
39
40
41
42
43
44
44
46
47
47
48
50
51







1 Executive Summary

The Autonomous Republic of Adjaria lies in the south-west of the Republic of Georgia. The Adjarian government is responsible for waste collection and removal within its territory. It intends to construct a new EU compliant sanitary landfill facility and close three non-compliant landfills to improve solid waste management in the region. A new 32-hectare regional landfill is under construction at Tsetskhlauri, 12 km north-east of Kobuleti, 6 km from the Black Sea and 45 km from Batumi, at a site far from the three mountain municipalities of Keda, Shuakhevi and Khulo, which, like much of the region, are facing major difficulties in managing solid waste. The challenge of SWM in these mountain municipalities is reaching critical levels and requires organisational and human resource, infrastructure and financial capacities beyond the means of these selfgovernments. The Adjarian government and the municipalities of Keda, Shuakhevi and Khulo are considering inter-municipal cooperation (IMC) for SWM. The present report analyses the possibilities of setting up such an IMC agreement, assesses the situation with regard to IMC and helps develop a vision and project for organising IMC among the target municipalities, which are willing to establish a waste management system. The question is how, and what the roles of the different municipalities will be in order to gain from joining their capacities and benefit from a larger scale operation of SWM.

Adjaria occupies an area of some 3,000 km². In 2014, it had a population size of 336,077, of whom nearly one half (152,839) lived in the capital city, Batumi, the second largest city in Georgia. There are five other municipalities in Adjaria: Kobuleti, Khelvachauri, Keda, Shuakhevi, and Khulo, the last three of which are referred to as the mountain municipalities. Keda includes the administrative centre Borough Keda and 60 villages, of which ten (16%) receive the service, along with three out of 69 communities (4%) in Shuakhevi, and thirteen out of 84 (15%) in Khulo. In all, some twelve percent of the communities, which include 7–30 percent of the population and 50–85 percent of the enterprises, are covered by the SWM service. Hills and lowlands comprise one-quarter (23%) of Adjarian territory, with the rest (77%) covered by mountains that are part of the Lesser Caucuses. Agricultural lands constitute a quarter of Adjarian territory, mostly stretching 100m up steep mountain slopes. Adjaria has considerable renewable energy resources: annual wind duration is estimated at 5,000–6,500 hours around Batumi and at Goderdzi Pass. Solar power and biogas technologies are gradually gaining a foothold in Adjaria, with 89 biogas plants at present with a total annual output of 96,790 m3. Adjarian lowlands have a humid subtropical climate, while the highlands are cold and humid.

In Adjaria the majority of the population live in rural areas. Keda, Shuakhevi and Khulo have the smallest population sizes in the region. Index mundi estimates a population change for the country of -0.05 percent, though this reduction is less than in 2000, when growth was -0.62 percent. Keda Municipality has a population size of 20,811 people, with 1,658 living in Daba Keda, 41 km from



Batumi. The municipality registers a road system that includes 48 km of state roads and 1,114 km of municipal roads, mostly gravelled or non-surfaced. Shuakhevi Municipality has a population size of 20,990 people, with 924 living in Daba Shuakhevi, 67 km from Batumi. The municipality's road system includes 80 km of state roads and 621 km of municipal roads, mostly gravelled or non-surfaced. Khulo Municipality has a population size of 31,651 people, with 1,100 living in Daba Khulo, 80 km from Batumi. The municipality's road system includes 43 km of state roads and 699 km of municipal roads, mostly gravelled or non-surfaced.

The owner and initiator of the Adjaria Solid Waste Project is the Ministry of Finance and Economy, MoFE, which created a company, Hygiena Ltd to undertake procurement, construction, operation and closure of the old landfills. There are some 70 unofficial dump sites in Adjaria, on the outskirts of villages and in the vicinity of major roads and rivers. These sites are unfenced, and domestic and farm animals can freely roam among them. Two official non-hazardous landfill sites in Gonio, Batumi, and in Kobuleti both opened in May 2010. Neither site has an environmental licence nor wastewater and gas treatment equipment and needs to be closed as soon as possible because of the poor conditions observed in and around them. Tsetskhlauri, in the NW of Adjaria, has been selected as the site for construction of a new sanitary landfill. The annual waste stream in Adjaria ranges from 0.34 tons per capita in Batumi to 0.02 tons in Shuakhevi. Collection and disposal of waste in Keda Municipality is only five percent. Nearly all of the waste is generated by households. In 2016, 1,000 m3 of waste were collected from households and enterprises in Shuakhevi, and some 200 tons from households and 250 tons from enterprises in Khulo. The figures for Shuakhevi have been increasing, from 700m3 in 2006, to 850m3 in 2011, a rate of increase of about 30 m3 per year. Analysis of waste collected in Batumi found the following composition: food (63%), clothing (11%), paper (8%), polyethylene (7%), glass (4%), plastic (3%), construction waste (2%) and aluminium cans (1%). There is no waste sorting undertaken officially at landfills in Adjaria, though landfill personnel routinely pick out useful materials (metal, glass) and sell them on to re-users.

In Keda Municipality, Atskhesi and Daba Keda streets are cleaned daily. Waste is collected from containers and transported to Batumi landfill every third day. In Shuakhevi Municipality, Daba Shuakhevi, Zamleti and Khichauri streets are cleaned daily and waste transported to Batumi every third day. In Khulo Municipality, household waste and other rubbish from Daba Khulo and nearby villages is collected, streets are cleaned and waste from waste bins and containers in Daba Khulo is transported to Batumi landfill three times a week, four times in summer.

The municipalities possess 305 waste containers, with 150 1.1m3 containers owned privately in Khulo. Keda now has an 8-ton compactor truck and Khulo, two 1.5-ton dump, or tipper, trucks. In addition to the main equipment.

Tariff collection rates are low and revenues account for a miniscule share of the total cost of waste management, without including the associated health and environmental costs. In Keda







Municipality, the current tariffs are for families, 0.15 GEL (€0.06) per capita monthly, and for legal entities, from 0.03–2.75 GEL (€0.01–1.03) per month. In 2016, waste tariff revenue totalled 35,000 GEL (€13,120). In Shuakhevi Municipality, the current tariffs are for families, 0.2 GEL (€0.08) per capita monthly, and for legal entities, from 0.01 to 0.32 GEL (€0.004–0.12) per month. In 2016, waste tariff revenue totalled 8,269 GEL (€2,304). In Khulo Municipality, the current tariffs are for families, 0.2 GEL (€0.08) per capita monthly, and for legal entities, from 0.03–1.44 GEL (€0.01–0.54) per month. In 2016, waste tariff revenues totalled 3,715 GEL (€1,390). Meanwhile, between them, the municipalities expend 335,792 GEL (€124,000) for the collection and removal of waste and street cleaning, and thus only 13.5 percent of the costs are covered by the revenues. The median cost for collection and removal of waste in Adjaria with the current service levels is about 22 GEL (€8.2) per ton, with a maximum of about 37 GEL (€13.8) and estimated landfill costs are 7 GEL (€2.6) and social costs 6 GEL (€2.2), bringing the total to 35–50 GEL (€13–€19) per ton. In the three mountain municipalities transportation costs are a major component of the overall waste collection and removal costs, and thus if they can develop an effective IMC it will go a long way to resolving their SWM situation.

Sufficient legislation exists for both SWM and IMC in Adjaria. Challenges include the fact that the region has no large city, apart from Batumi, but rather many small towns and villages, that the mountainous terrain makes long-distance transport difficult and that low incomes make recovery of the cost of the waste management service a major challenge.

Georgia has just begun taking steps towards effective decentralisation. Given the intention to devolve some central authority competences to local self-governments, implementation of IMC is becoming increasingly relevant. In the local government reform of 2006, the first level of self-government in Georgia (1,004 entities) was abolished, leaving 64 regional self-governments, widening the gap between citizens and government. The changes were justified by alleged ineffectiveness of small municipalities in delivering public services (even though sufficient financial resources had never been devolved to local self-governments). The average population size within a self-governing entity increased, from 4,350 to 68,050. IMC has rarely been used in the management of waste disposal in Georgia, with the only known example SWM in the city and surrounding community of Zugdidi, in Samegrelo-Zemo Svaneti. Despite its general nature, a legal framework exists in Georgia that allows municipalities to actively engage in IMC. The issue is what form of IMC would be most appropriate for the mountainous municipalities of Adjaria. In 2015, some 263 million GEL (O7 m) was spent on the activities of the 1,060 municipal enterprises, including 260.5 million GEL (O6 m) from municipal budgets. Some 46,000 individuals were employed in these enterprises, with salaries accounting for 60 percent of the budget.

Analysis of the stakeholders in a potential SWM IMC, including the customers, local and central authorities, international organisations and local NGOs, and waste companies, is undertaken and



reported below. The CoE has provided funding of €45,000 for starting up the IMC SWM project, and the three municipalities plan to apply together for this funding opportunity. Meanwhile, four possible IMC scenarios are proposed based upon experiences in other countries. At meetings held in Tbilisi in early April 2017 it was decided to set up a consortium of municipalities and establish an inter-municipal enterprise for SWM in Keda, Shuakhevi and Khulo.







2 Introduction

2.1 Context for the pre-feasibility study

The Autonomous Republic of Adjaria lies in the south-west of the Republic of Georgia. The Adjarian government is responsible for waste collection and removal within its territory. It intends to construct a new EU compliant sanitary landfill facility and close three non-compliant landfills to improve solid waste management (SWM) in the region through the project *Adjaria Solid Waste Project* (SWECO 2015a,b).

A new 32-hectare regional landfill is currently under construction in the western outskirts of the village of Tsetskhlauri (Figure 1a), which lies 12 km north-east of Kobuleti and some 6 km from the Black Sea coast and 45 km from Batumi. A local Environmental and Social Impact Assessment (ESIA) for the site at Tsetskhlauri was published in June 2015 (SWECO 2015b). Unfortunately, this location is 126 km from the centre of Khulo (distances to current landfills are shown in Figure 1b), presenting a major challenge for both this municipality and the other mountain municipalities in managing solid waste. A photograph in the front page of the present report indicates the scale of the problem with houses distributed throughout the landscape, presenting a real challenge for any waste collection service. An announced tender has failed, while the region's capital, Batumi, has provided some service support, with limited success. It is the responsibility of the mountain municipalities to solve this problem.

Figure 1. a) Location of Tsetskhlauri the site of proposed landfill, relative to Batumi, Kobuleti and the mountain municipalities, and b) distances to landfills from these mountain municipalities



The challenge of SWM in Adjaria, particularly in the mountain municipalities, is reaching critical levels and requires organisational and human resource, infrastructure and financial capacities beyond the those of the individual local governments. The Adjarian government and the



municipalities of Keda, Shuakhevi and Khulo are considering the possibility of inter-municipal cooperation (IMC), and how it will function in bringing resources together, to deliver waste management services that can benefit from a larger scale operation.

The aim of the present report is to present an analysis of the possibilities of setting up an IMC agreement in Adjaria to deal with the SWM situation, to assess the situation with regard to IMC and help develop a vision and project for organising IMC on SWM among the target municipalities. It will assist them in focusing on articulating and agreeing upon the objectives, both general and technical, and scope of an IMC among the municipalities with regard to SWM issues of municipal competence, including waste planning, service coverage, collection, transport, recycling activities, waste tariffs and public awareness.

2.2 Initiators and promoters of the project

A number of efforts are already in place to improve the SWM situation in general in Georgia, including by the Council of Europe (CoE), the European Bank for Reconstruction and Development (EBRD) and Kreditanstalt für Wiederaufbau (KfW). Under the CoE–EU Eastern Partnership Programmatic Cooperation Framework 2015–2017, the Thematic Programme *V.2 Strengthening institutional frameworks* for local governance is targeting support for encouraging IMC in Georgia. After a series of workshops held in Tbilisi it was decided among the Georgian counterparts to develop IMC in the area of SWM in Adjaria, given the pressing need described above.

In Adjaria, the objective of the CoE Programme is to facilitate discussion and decision making on possible IMC agreements, starting from proposing a vision and undertaking an analysis of the feasibility of the undertaking.

The three municipalities are willing to establish a joint waste management system; the question is how, and what the roles of the different municipalities will be. These municipalities have low revenues and limited budgets, and a single municipality is unable to set up a waste management system on its own. Therefore there is a need to help Keda, Shuakhevi and Khulo establish such a system jointly, after which SWM can be sustained with their shared resources.

The main challenges include i) a low awareness in the population of proper SWM and the consequences of poor management, with ii) dumping taking place into the River Chorokhi and its tributaries, iii) the presence of many dumpsites in villages, iv) no companies interested in providing services in mountainous areas, and v) very low collection rate of waste and waste management tariffs. All these challenges fall under the competences of the municipalities. The issue discussed in the present document is whether IMC can help resolve these problems.



2.3 Structure of document

The present pre-feasibility study introduces the problem and the actors involved in meeting the challenge. It describes the socio-environmental, legal and institutional environments, and presents an analysis of the current situation of both IMC and SWM in Adjaria. It presents an analysis of the stakeholders along with a series of options for resolving the challenges, the institutional set-up required, the main findings and recommendations. Finally, the document presents a sketch of an action plan required to set up an IMC among Keda, Shuakhevi and Khulo municipalities, and the costs involved.









3 Review of current situation

3.1 Area covered and impacted by project

The communities in the three municipalities involved in the present project that will receive the SWM service are reported in Table 1. Keda includes the administrative centre Borough Keda and 60 villages (see Annex 1), of which ten (16%) will receive the service, along with three out of 69 communities (4%) in Shuakhevi (Annex 2), and thirteen out of 84 (15%) in Khulo (Annex 3). In all, some twelve percent of the communities, which include 7–30 percent of the population, and 50–85 percent of the enterprises will be covered by the SWM service.

Table 1. Villages and communities, their population sizes (pop.) and number of businesses (ent.) in municipalities of Keda, Shuakhevi and Khulo that will be covered by the SWM service

Keda	pop.	ent.	Shuakhevi	pop.	ent.	Khulo	pop.	ent.
Keda Borough	1,658	66	Shuakhevi Borough	924	44	Khulo Borough	1,100	49
Kveda Makhuntseti	392	12	Khitcauri	349	10	Riketi	513	5
Merisi centre	422	3	Zamleti	263	1	Danisparauli	588	2
Zvare centre	201	4				Shuasopeli	167	0
Tsoniarisi centre	772	1				Didi Riketi	378	2
Tskhmorisi centre	811	8				Bodzauri	593	3
Pirveli Maisi centre	652	4				Didadjara	1,830	4
Kveda Makhuntseti (Atshesi) 0	§				Tabakhmela	216	2
Tskhemna	158	2				Paksadzeebi	425	3
Dandalo centre	471	0				Dioknisi	369	3
Kokotauri centre	663	4				Kvemo Vashlovani	1264	3
						Khinchauri	305	4
						Dekanashvilebi	672	3
						Beshumi Resort	0*	0
Total served	6,200	104		1,536	55		8,420	83
Municipal total	20,811	122		20,990	110		31,651	155
Percent served	30	85		7	50		27	54

§, staff for hydroelectric power plant construction are included in the village above; *, summer resort population of 4,500 visitors

3.2 Community profiles

Adjaria occupies an area of some 3,000 km². In 2014, it had a population size of 336,077, of whom nearly one half (152,839) lived in the capital city, Batumi, the second largest city in Georgia. There are five other municipalities in Adjaria: Kobuleti, Khelvachauri, Keda, Shuakhevi, and Khulo, the last three of which are referred to as the mountain municipalities.



Batumi Sea Port on the Black Sea coast is part of the transport corridor Europe-Caucasus-Asia (TRACECA), and one section of the East-West Highway, the country's main transport artery, traverses Adjarian territory. Reconstruction of this main road linking Adjaria with the neighbouring region of Samtskhe-Javakheti, and eventually Armenia, is about to start. Minibuses are the main means of transport in the mountain municipalities.

Agricultural lands constitute a quarter of Adjarian territory, mostly stretching 100m up steep mountain slopes. However, traditional agricultural sectors—citrus fruits and tea farming—have all but vanished in the last quarter of a century, rapidly replaced by honey and hazelnut farming. Abundant natural resources include non-ferrous metals, brick and masonry reserves, as well as natural mineral and spring waters.

Adjaria has considerable renewable energy resources: annual wind duration is estimated at 5,000–6,500 hours around Batumi and at Goderdzi Pass. Solar power and biogas technologies are gradually gaining a foothold in Adjaria, with 89 biogas plants at present with a total annual output of 96,790 m³. Tourism is the backbone of the Adjarian economy, with much potential for growth.

3.2.1 Topography and climate

Hills and lowlands comprise one-quarter (23%) of Adjarian territory, with the rest (77%) covered by mountains that are part of the Lesser Caucuses. The coastal areas (seashore and sub-mountainous zones up to 100–200m above sea level) are flanked to the east by rugged mountainous terrain ranging from 200–1,000 metres above sea level. Eastern, southern and northern parts of Adjaria are dominated by mountains 1,000–3,000 m high, even the highest of which do not have year-round snow-caps; the easternmost area (Goderdzi Pass and surrounding mountains) is covered by snow 7–8 months a year.

Adjarian lowlands have a humid subtropical climate, while the highlands are cold and humid. The average yearly temperature ranges from 14.5C (Batumi) to 2.4C (Goderdzi Pass). Adjaria has the highest average annual precipitation in Europe—2,600 mm in the lowlands and 1,500 mm in the alpine zone. The region is very vulnerable to natural disasters (floods, landslides)—partly as a result of soil erosion—that have become increasingly common over the last century. Uncontrolled logging is a major factor contributing to the ongoing soil degradation; the highest altitudes reached by forested areas are 300–400 m lower than they were a century ago.



3.2.2 Demography

In Georgia the population size in the regions controlled by the central government was 4,321,500 in 2005 and 4,382,100 in 2008.¹ In Adjaria the majority of the population live in rural areas. Keda, Shuakhevi and Khulo have the smallest population sizes in the region.

According to the International Organisation of Migration (IOM), more than 50,000 people (13%) emigrated from Adjaria in the 1990s, many from Shuakhevi and Khulo municipalities, where the number of economic migrants reached 16,800 from 1989–1999, of whom one-third (5,300) returned.

Georgia was listed among the highest-emigration countries in the world in the 2007 World Bank report. Index mundi estimates a population change for the country of -0.05 percent (http://www.indexmundi.com/georgia/population_growth_rate.html), though this reduction is less than in 2000, when the figure was -0.62 percent. Many emigrants move from remote rural areas, and thus demand for the SWM systems in Adjaria's mountain areas will be less. On the other hand, the load will increase as more people and businesses are included in the service area. Meanwhile, official figures show a slight increase in population growth in Adjaria between 2002 and 2006, ranging from 0.45–0.73 percent. Using World Bank data Knoema.com reports a slight increase in the population sizes of these municipalities between 2002 and 2014 (Figure 2).

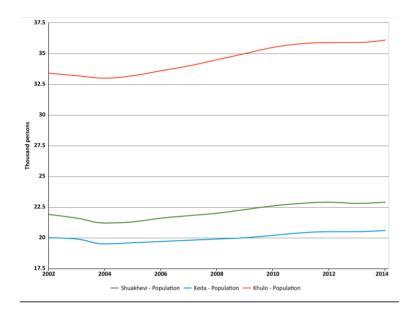
Keda Municipality has a population size of 20,811 people, with 1,658 living in Daba Keda, 41 km from Batumi. With a territory of 459 km², the average population density in the municipality is 45 persons per km². Arable and agricultural lands total 7,900 ha, including 2,300 ha of hay fields, 2,200 ha of pastures and 2,800 ha of small household farms, with an average size of 0.63 ha. Three-quarters (77%) of the territory is covered by forests. Only 15 percent of local landowners have registered their land. Livestock farming is the main agricultural production sector of the municipality, while maize is the staple of local agriculture; Keda produces the most maize in Adjaria. Grape is the most widespread plant, while local trout farms are the most productive in the region. Mineral resources of Keda Municipality include copper, gold and lead and zinc.

Figure 2. Change in population size in Keda, Shuakhevi and Khulo municipalities from 2002–2014





¹ The 2014 census put the number at 3.7 million, though the figure is disputed



The municipality registers a road system that includes 48 km of state roads and 1,114 km of municipal roads, mostly gravelled or non-surfaced. All local villages receive electricity 24 hours a day (90% of local households have electricity meters) and are also supplied with potable water and liquefied gas. Only Daba Keda has a functional sewage system. There is a sewage treatment plant in the municipality (with 400 m³ output), but it is out-dated and needs renovation. All local homes have access to the fixed landline telephone network, though most do not have Internet. There is one hydro-electric power plant in the municipality, with one more—Koromkheti Hydro—scheduled for construction work to start in 2017.

<u>Shuakhevi Municipality</u> has a population size of 20,990 people, with 924 living in Daba Shuakhevi, 67 km from Batumi. With a territory of 578 km², the average population density in the municipality is 36 persons per km². The landscape is dominated by medium elevation mountains with steep slopes. Arable and agricultural lands total 17,000 ha, including 10,500 ha of pasture, with two-thirds (67%) of the territory covered by forests. Most local residents are involved in subsistence agriculture, with the average size of a farm, 1.31 ha. Nearly all (97%) local landowners have yet to register their land. The main agricultural products of Shuakhevi are potato and maize. There is little agricultural mechanisation because of the small size of the farms, most of which lack irrigation.

The municipality registers a road system that includes 80 km of state roads and 621 km of municipal roads, mostly gravelled or non-surfaced. All local villages receive electricity 24 hours a day. Potable water is supplied by the municipal enterprise Shuakhevi Tskalkanali. Only Daba Shuakhevi has a centralised sewage system, albeit out-dated and defunct. There is a small hydroelectric power plant in the municipality. A new power plant, Shuakhevi Hydro, is to be completed in 2017, with a total budget of 400 m USD. The Goma health resort is about to be renovated.



Khulo Municipality has a population size of 31,651 people, with 1,100 living in Daba Khulo, 80 km from Batumi. With a territory of 692 km², the average population density in the municipality is 46 persons per km². The landscape is dominated by high elevation mountains with steep slopes. Most of the territory is covered by forests. Arable and agricultural lands total 27,700 ha, including 15,000 ha of pasture. The average size of the household farm is 0.78 hectares, and 89 percent of the local landowners have yet to register their land. Local agriculture is focused on potato growing and livestock farming. Some 80 percent of residents subsist on dairy production.

The municipality's road system includes 43 km of state roads and 699 km of municipal roads, mostly gravelled or non-surfaced. There is also a cable car from Daba Khulo to the village of Tago and at Goderdzi Pass serving the ski resort. All local villages receive electricity 24 hours a day. However, there is no centralised water supply network, nor sewage system. Every village has its own gravity flow supply system to obtain fresh water from reservoirs fed by mountain springs. Household sewage is dumped into the Acharistskali River through open channels, and hence into the River Chorokhi. Khulo Municipality includes 76 mountain lakes.

The main infrastructure projects in the three municipalities include the following:

- Textile factory, to be completed in 2017, will employ 50 workers.
- Alpine botanical gardens near Beshumi health resort will be completed by early 2018.
- Beshumi summer health resort includes 800–850 cottages, while Beshumi Resort Ltd. has 25 cottages in the area.
- Goderdzi Ski Resort will include six cottages, a restaurant, a hotel and an administrative building.

3.3 Current situation of SWM in Adjaria

The location of seven non-compliant landfills in Adjaria (with Kobuleti having 2 sites) is shown in Figure 3. The owner and initiator of the *Adjaria Solid Waste Project* is the Ministry of Finance and Economy, MoFE, which created a company, Hygiena Ltd to undertake procurement, construction, operation and closure of the old landfills.

There are some 70 unofficial dump sites in Adjaria, on the outskirts of villages and in the vicinity of major roads and rivers. These sites are unfenced, and domestic and farm animals can freely roam among them. Meanwhile, fly-tips spontaneously emerge near health resorts during holidays. For example, a 0.03 ha dump site near one resort in Khulo Municipality collects some 500 m³ of waste every summer. Such sites systematically cause soil and groundwater contamination and hamper farming.



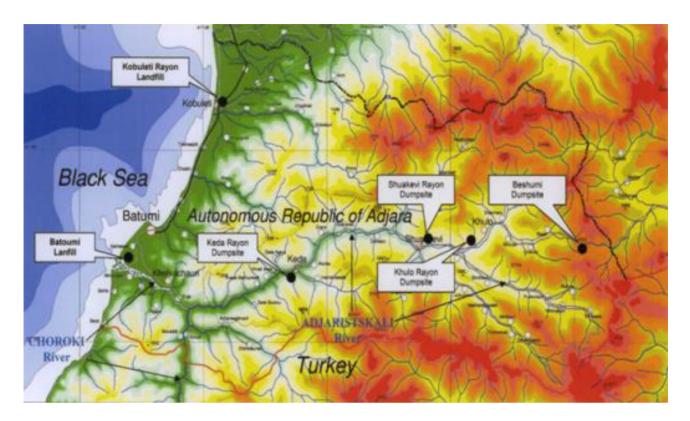
Two official non-hazardous landfill sites in Gonio, Batumi, and in Kobuleti both opened in May 2010. The site at Gonio is by the River Chorokhi, is 20 ha in size and collects annually 310,000 m³ (perhaps some 42,000 tons, though ICMA and CENN, 2016, put the figure at about 7,000 tons) of waste from Keda, Shuakhevi and Khulo. The site at Kobuleti is much smaller (2.5 ha) and collects 40,000 m³ of household waste annually from the local area. Neither site has an environmental licence nor wastewater and gas treatment equipment and needs to be closed as soon as possible because of the poor conditions observed in and around them.

The selection of Tsetskhlauri as the site for construction of a new landfill follows an EIA undertaken in 2008 (Rydergren 2008) in which Chakvi was selected. That project was started in 2005, though the location was abandoned in 2011 due to strong social opposition and a set of other issues, including a noticeably high water table and proximity to a new highway adding to the burden on the local community.

ICMA and CENN (2016) report that the annual waste stream in Adjaria ranges from 0.34 tons (just less than 1kg per day) per capita in Batumi to 0.02 tons (60g a day) in Shuakhevi, and that collection and disposal of waste in Keda Municipality is only five percent. Nearly all (95%) of the waste is generated by households. In summer organics comprise about 40 percent of the waste stream, polyethylene plastics about 20 percent, paper and cardboard 17 percent, with glass, scrap metal and other constituents accounting for smaller fractions. The volume of waste is noticeably higher during the summer vacation season.

Figure 3. Location of existing non-compliant landfills in Adjaria





In 2016, 1,000 m³ of waste were collected from households and enterprises in Shuakhevi, and some 200 tons from households and 250 tons from enterprises in Khulo. The figures for Shuakhevi have been increasing, from 700m³ in 2006, to 850m³ in 2011, a rate of increase of about 30 m³ per year.

Figures for monthly waste disposal at the Gonio site are reported in Table 5. Again, the amount of waste has been increasing year on year, from 60,000 tons in 2012 to 68,000 tons in 2014. Unfortunately, the landfill only records the total weight that is disposed of and not the source.

Table 5. Monthly waste disposal (000 tons) at Gonio, 2012–2014

Month	2012	2013	2014
January	4.63	4.65	4.96
February	3.91	4.00	4.11
March	4.26	4.39	4.43
April	4.18	4.20	5.19
May	4.74	4.75	5.34
June	4.97	4.98	5.93
July	6.32	6.33	7.03
August	6.78	6.81	7.57
September	5.80	5.85	6.31
October	5.35	5.38	5.68







Total	59.95	61.40	67.78
December	4.06	5.12	5.86
November	4.95	4.95	5.37

Household waste comprises mostly food scraps and food packaging. In a study of waste collected in Batumi, analysis found the following composition: food (63%), clothing (11%), paper (8%), polyethylene (7%), glass (4%), plastic (3%), construction waste (2%) and aluminium cans (1%), with wood, leather, resins and hazardous waste each comprising less than one percent.

There is no waste sorting undertaken officially at landfills in Adjaria, though landfill personnel routinely pick out useful materials (metal, glass) and sell them on to re-users. There are some 50 enterprises with environmental licences in the region, of whom five are licenced to deal with toxic and hazardous waste.

ICMA and CENN (2016) report that recycling and composting of organic waste in Georgia has the potential to cover costs, with transportation cost savings associated with local composting ranging from 2 GEL (€0.75) in Batumi to 25 GEL (€0.3) in Khulo, and overall benefits ranging from 28–52 GEL (€10.5–19.4) per ton. For distant municipalities such as Khulo and Shuakhevi, transportation cost savings dominate other benefits.

3.4 Organisational structure of solid waste management system

<u>In Keda Municipality</u> Atskhesi and Daba Keda streets are cleaned daily. Waste is collected from containers and transported to Batumi landfill every third day by Batumi Sandasuptaveba Ltd. The municipal government holds a tender for waste collection and transportation, and the economy and infrastructure service, the monitoring and control service and the communal service carry out day-to-day monitoring and oversight of the waste collection. Sandasuptaveba is fully owned by Batumi Municipality, where the company is responsible for street cleaning and the collection, transportation and disposal of household waste, hazardous and toxic substances, and medical waste, as well as snow cleaning in winter.

<u>In Shuakhevi Municipality</u> several winners of the municipal tender share responsibility for street cleaning and waste collection and transportation from Daba Shuakhevi, Zamleti and Khichauri. Streets are cleaned daily and waste is transported to Batumi every third day. The municipality economy, architecture and infrastructure service and the monitoring and control service carry out day-to-day monitoring and oversight of the waste disposal process.

<u>In Khulo Municipality</u> two companies share responsibility for collection and transportation of municipal waste to the landfill in Batumi: Global Supplier Ltd and Batumi Sandasuptaveba. Global









Supplier collects household wood waste and other rubbish from Daba Khulo and nearby villages, cleans streets and collects waste from waste bins and containers in Daba Khulo, transporting it to Batumi landfill three times a week, four times in summer. Sandasuptaveba collects residual waste and transports it to Batumi. The municipal government's economic policy and infrastructure service and the monitoring and control service carry out day-to-day monitoring and oversight of the waste disposal process.

3.5 Current technical set-up: existing and proposed landfills, fly-dumps, transfer stations

In the mountain municipalities of Adjaria there are no official landfills nor transfer stations. Instead there is a large number of illegal waste dumps; known fly-tips and landfills are reported in Table 2.

Table 2. Known fly-tips and landfills

Municipality	Landfill	Villages
Keda	illegal	Total of 5 places where waste has accumulated
Keua	licensed	0
Shuakhevi	illegal	Whole region, particularly in ravines and rivers
Siluakilevi	licensed	0
Khulo	illegal	Communities (administrative units) of Riketi, Dioknisi, Ghordjomi, Agara, Satsikhuri, Didadjara, Dekanashvilebi, Vashlovani, Skhalta, Pushrukauli, Khikhadziri, Tkhilvana
	licensed	0

The municipalities do possess limited waste management equipment (Table 3), including 305 waste containers of various sizes owned by the municipalities, and 150 privately-owned 1.1m³ containers in Khulo. Keda now has an 8-ton compactor truck and Khulo, two 1.5-ton dump, or tipper, trucks. In addition to the main equipment, Keda Municipality uses some 1,500 plastic bags for some three or four cleaning actions per year.



Table 3. SWM equipment in the three mountain municipalities

Municipality	Equipment	Units	
	0.7 m ³ waste bins	85	mix of old and new, municipal owned
Keda	1.1 m ³ waste containers	150	mix of old and new, municipal owned
	8 ton compactor truck	1	municipal owned, purchased in 2017
	0.24 m ³ waste bins	6	old, municipal owned
Shuakhevi	0.8 m ³ waste containers	34	old, municipal owned
	truck	0	
	0.5 m ³ waste bins	30	old, municipal owned
Khulo	1.1 m ³ waste containers	150	old, privately owned
	1.5 ton dump truck	2	municipal owned, purchased in 2016

3.6 System of payments for SWM service, tariffs, collection rates, and current financial situation

Tariff collection rates are low and revenues account for a miniscule share of the total cost of waste management, without including the associated health and environmental costs. The charge of 1.7 GEL (€0.64) per ton in Batumi represents one percent of the cost per ton for waste collection, street sweeping and waste removal (ICMA and CENN 2016, page 9). Given the longer distances involved for Keda, Shuakhevi and Khulo this percentage will be even lower for those municipalities. For comparison, the average annual budgetary outlay on waste management services per person receiving them is 91 GEL (€34) per year in Shuakhevi, while it is 41.9 GEL (€15.6) per ton in Batumi.

The three municipalities apply similar schemes to fund the waste disposal process. The tariffs and revenues collected in Keda, Shuakhevi and Khulo are reported in Table 4.

Table 4. Waste disposal tariff and revenues collected from the three mountain municipalities

Municipality	Category	No.	Tariff	Note	Revenues collected (GEL)	
					2015	2016
	legal entity	155	differential		35,000	35,000
Keda	families	620	0.15		0	0
	total					35,000
	legal entity	64	0.00	tariff not fixed	4,851.72	6,851.72
Shuakhevi	families		0.20	tariff not fixed	0	1,417.28
	total					8,269
	legal entity	51	0.00	tariff not fixed	1,984.65	3,715.52
Khulo	families		0.20		0	0
	total					3,715.52

Keda Municipality



Under Resolution No. 39 of 20 March 2007 of the municipal council (*sakrebulo*), a fixed waste tariff, payable monthly, was imposed on every individual and legal entity. The current tariffs are for families, 0.15 GEL (€0.06) per capita monthly, and for legal entities, from 0.03–2.75 GEL (€0.01–1.03) per month. In 2016, waste tariff revenue totalled 35,000 GEL (€13,120).

Shuakhevi Municipality

Under Resolution No. 4 of 28 February 2011 of the municipal council, a fixed waste tariff, payable monthly, was imposed on every individual and legal entity. The current tariffs are for families, 0.2 GEL (€0.08) per capita monthly, and for legal entities, from 0.01 to 0.32 GEL (€0.004–0.12) per month. In 2016, waste tariff revenue totalled 8,269 GEL (€2,304).

Khulo Municipality

Under Resolution No. 3 of 28 March 2014 of the municipal council, a fixed waste tariff, payable monthly, was imposed on every individual and legal entity, but revised by Resolution No. 1, 26 January 2017. The current tariffs are for families, 0.2 GEL (€0.08) per capita monthly, and for legal entities, from 0.03–1.44 GEL (€0.01–0.54) per month. Previously, with Resolution No. 4, 29 January 2015, Khulo Municipal Council had exempted all villages and towns, except Daba Khulo, from penalties, since no waste services and control mechanisms were provided. In 2016, waste tariff revenues totalled 3,715 GEL (€1,390).

The median cost for collection and removal of waste in Adjaria is about 22 GEL (€2.2) per ton, with a maximum of about 37 GEL (€3.8) and estimated landfill costs are 7 GEL (€2.6) and social costs 6 GEL (€2.2), bringing the total to 35–50 GEL (€13–€19) per ton.

Between them, in 2017, the municipalities are expending 335,792 GEL (Annex 4; €124,000) on the collection and removal of waste and street cleaning, and yet, in 2016, only an amount of 46,984 GEL (Table 4; €16,814) was collected from tariffs, clearly insufficient to cover the costs (13.5%).

Meanwhile, the CoE has provided funding of €45,000 for starting up the IMC SWM project, and the three municipalities plan to apply together for this funding opportunity.



4 Environmental and social legal and institutional environment including a master plan for sanitary landfills in Georgia

The official status of Adjaria as an autonomous republic is defined by the constitutions of Adjaria and Georgia.

4.1 Solid waste collection and management

The Constitution of the Republic of Georgia (2010) is the main document for the country and includes guidance for regulations on the environment. Article 37 states that every citizen has the right to live in a healthy environment and enjoy natural and cultural surroundings, while at the same time being obliged to care for natural and cultural environment. Paragraph 5 states that every citizen has the right to receive a complete, objective and timely information as to the state of his/her working and living environment. The Constitution states also that the state shall guarantee the protection of environment and the rational use of nature.

Waste management in Georgia is governed and regulated by laws on the following:

- Soil Protection (1994) defines the upper concentration limits of toxic and hazardous substances in soil, prohibits the use of arable lands for non-agricultural purposes, and bans any activity that can potentially cause soil damage or worsen soil quality.
- Environmental Protection (1996) regulates interaction and communication among governmental institutions, individuals and legal entities in relation to environmental protection and the use of natural resources. The law includes environmental requirements for waste disposal (Article 34).
- Water (1997) defines competences and responsibilities of central government agencies, regional governments and local self-governments in the field of water supply.
- Licences and Permits (2005) regulates any activity that involves potential risks for human health or life, or for the use of natural resources. Under the law, a foreign licence or permit can be recognised on the basis of an international agreement or legislation.
- Environmental Impact Assessment (2007) makes EIA mandatory for any activity that can have an impact on the environment and for construction permits and licences. The assessment process is regulated by the Ministry of Environment and Natural Resources Protection (MENRP).
- Environmental Licensing (2007) specifies a full list of activities that require mandatory environmental licensing on Georgian territory. Article 4 makes environmental licensing mandatory for solid waste recycling facilities and landfills. Under the law, the power to review and analyse licence applications and issue environmental licences is conferred on MENRP.



• Public Health (2007) defines the rights and responsibilities of individuals and legal entities in relation to public health, and mandatory standards and requirements for air, water and soil quality, and levels of noise, vibration and electromagnetic radiation.

Some other laws are indirectly related to management of waste disposal (1998 Law on Sanitary Protection Zones and Health Resorts, 1998 Law on Toxic and Hazardous Chemical Substances, 1999 Law on Complex State Assessment and Licensing of Construction Projects, and some provisions of 1999 Law on Compensation for Damages Caused by Toxic and Hazardous Substances). In addition, waste disposal is also governed by a number of regulations imposed by government, as follows:

- decree 416 on enactment of Solid Waste Landfill Construction and Operation Rules and Norms, 2013
- decree 428 on enactment of Toxic and Hazardous Chemical Substances Labelling Regulation, 2013
- decree 64 on enactment of Sanitary Norms for Collection, Storage and Recycling of Waste from Medical and Decease Prevention/Control Facilities, 2014.

One of the most significant pieces of legislation is Law No. 2994, Waste Management Code, enacted on December 26, 2014. This law defines the powers and responsibilities of municipalities in the waste disposal management process, including the following:

- municipal waste management, including elaboration of a municipal waste management plan: articles 6 and 13
- litter control (if a litterer can be ascertained or reached) and clean-up of a littered area (provided it is not privately owned): article 8
- collection and treatment of municipal waste: article 16; paragraphs 4, 5 and 6 of which state:
 - When a separate waste collection system is introduced into the territory of a municipality, producers of municipal waste are obliged to use the system.
 - Municipal waste shall be collected and treated according to a governmental sub-law on municipal waste collection and treatment services.
 - Municipalities are entitled to create, implement and manage a joint municipal waste management system.
- penalties—enacted by means of a normative act—for polluting a territory with sludge waste, burning non-hazardous waste outside or inside a non-conforming burning installation, violation of the requirement for submitting a company waste management plan: articles 33, 35 and 43.

According to the Code:



- Collection and/or transport of waste and construction and operation of temporary storage facilities for non-hazardous waste with a capacity of more than 50 tonnes may only be carried out on the basis of a prior registration (article 26).
- Each municipality shall adopt a municipal waste management plan no later than December 31, 2017 (article 48).

A National Master Plan for Sanitary Landfills in Georgia has been drawn up in the framework of KfW's Eastern Europe Energy Efficiency and Environmental Partnership (E5P) activities that focus on municipal investments (Schaub, 2015). The plan includes a map of the distribution of the various landfills intended to be constructed in the various regions, including the one in Adjaria (Figure 4). Challenges include the fact that the country has few large cities, but rather many small and medium-sized towns, that the mountainous terrain makes long-distance transport difficult and that low incomes, especially in semi-urban and rural areas, make coverage of the cost of the waste management service a major challenge. The aims of the plan are to determine the number and identify the locations of new sanitary landfills that are required to be built, their catchment areas and locations, and to develop strategies for minimising and recycling waste, and for disposal at the new landfills to comply with internationally accepted standards.

Figure 4. Distribution of landfills intended to be constructed in Georgia (National Master Plan for Sanitary Landfills)





4.2 Environmental and Social Impact Assessments

SWECO and the environmental consultancy company Ecolcenter Ltd jointly prepared an environmental impact assessment (EIA) report in 2014 relating to the construction and operations of solid waste landfills in Adjaria. The report outlined environmental control and monitoring mechanisms and measures to mitigate or prevent potential negative environmental impact.

Previously, a site had been chosen at Chakvi so as not to be close to densely populated areas, health resorts, agricultural farms or national parks. There had been several alternative sites to choose from, mostly on territories currently within the boundaries of Batumi:

- former military irregular dump site on the left bank of the Chorokhi River
- Akhalsopeli–Khlobcho, Khelvachauri administration
- a reservoir near Batumi landfill, in the Kakhaberi zone
- Khelvachauri industrial zone
- a tea plantation, Salibauri neighbourhood (Benze)
- micro-region (rayon) 7 (Chakvi) near new road tunnel.

The first five of these locations were rejected since all were too close to the new international highway, and in the end so was the one at Chakvi, and each location would have met with fierce resistance from local people. The hazardous (medical) waste incinerator at Batumi landfill would be relocated to the new site.

Once the project site was identified at Tsetskhlauri, a preliminary Environmental Impact Assessment (EIA) report was prepared, and approved by the local authorities in July 2014. Several opportunities to access information and to put forward questions or comments were provided during the process, and a local hearing took place on the 8 September 2014 in Kobuleti Municipality. The estimated cost of the new landfill is €14.8m.

It is planned to increase the tariff for waste disposal to fund the new landfill operations, rising from 0.58 GEL (€0.22) to 0.82 GEL (€0.32) from 2013–2019. For comparison, the average per capita monthly wage for urban areas was 276 GEL (€107) in 2013, and 216 GEL (€84) for rural areas, the gap has been increasing since 2006 (SWECO 2015b). Thus for the mountainous areas the waste tariff represents just less than 0.4 percent of income per capita, and proportionately less than this for a household of more than one member.

It is noteworthy that under the current plan, the new landfill will remove waste from Batumi, Kobuleti and Khelvachauri municipalities. The mountainous regions of Adjaria are not included in the scheme yet, pending the Adjarian government's decision.



4.3 Inter-municipal cooperation

The Local Self-Government Code of Georgia adopted in 2014 dedicated specific articles (20 and 21) to the matters of IMC, though these were still insufficient for a legal framework for such cooperation. Changes made to the Code in 2015 have brought some clarity to defining the procedures:

- Pursuant to Article 20, municipalities have the right to set up non-profit (non-commercial) legal body or/and obtain membership of such body. Such associations have the right to cooperate with the state authorities, as well as with international unions (associations).
- Article 106, determining the status and forms of activities of municipal legal bodies of private law, was added to the Code.
- Article 21 grants to municipalities the right to found joint enterprises, become partners/founders of a limited company, and/or their members, set up joint servants and unify budgetary resources.
- This right extends to only those enterprises that are founded by municipalities who, between them, own more than 50 percent of the shares.
- These enterprises can receive property through auctions or direct disposal (gratuitously or with recompense).
- Transfer of property without auction, free of charge, with the right of utilisation for a maximum of two years unless the property is handed over to other public authority bodies: municipality, central authorities, legal bodies of public law (except for political parties).

The legislation makes reference to self-government units implementing joint activities, though the entry provides little clarity on procedures.

4.4 EU and other international requirements

- International agreements and conventions ratified by Georgia and relating to the planned activities include the following:
- Kyoto Protocol United Nations Framework Convention on Climate Change (UNFCCC; Georgia joined in 1995 through parliamentary resolution; ratified in 1999)
- Montreal Protocol on Substances that Deplete the Ozone Layer (joined in 1996, government decree 711; joined London, Copenhagen and Montreal Revisions in 2000 through parliamentary resolutions 376, 377 and 37)
- Geneva Convention on Long-range Transboundary Air Pollution (joined in 1996, parliamentary resolution 8)
- Convention on Biological Diversity (Rio; ratified in 1994, parliamentary resolution)
- International Convention on Civil Liability for Oil Pollution Damage (joined in 2000, parliamentary resolution 85)







- United Nations Convention to Combat Desertification (joined in 1994, government decree 711; ratified in 1999)
- United Nations Convention on Access to Information, Public Participation in Decision making and Access to Justice in Environmental Matters (Aarhus Convention; joined in June 1998; ratified in April 2000)
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (ratified in 1998).

Georgia is party to an Association Agreement with the EU and complies with the standards and directives of the latter, including the following:

- Council Directive 75/442/EEC on waste, as amended by Council Directive 91/156/EEC, Commission Decision 2000/532/EC on the list of waste (3 May 2000), as amended by Directives 2001/18/EC, 2001/19/EC and 2001/573/EC.
- Council Directive 96/82/EC (9 December 1996) on the control of major-accident hazards involving dangerous substances
- Council Directive 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations.
- European Directive 1999/31/EC on the Landfill of Waste (26 April 1999)
- Directive 2000/76/EC of the European Parliament and of the Council on the incineration of waste (4 December 2000).
- Council Directive 94/67/EC on the incineration of hazardous waste (16 December 1994).
- Council Directive 89/369/EEC on the prevention of air pollution from new municipal waste incineration plants (8 June 1989)
- Council Regulation (EEC) No 259/93 on the supervision and control of shipments of waste within, into and out of the European Union (1 February 1993)
- Council Directive 91/271/EEC on urban waste water (21 May 1991)
- Council Directive 1986/278/EEC on the Protection of the Environment and in Particular the Soil when Sewage Sludge is used in Agriculture
- Council Directive 96/61/EC on Integrated Pollution Prevention and Control (IPPC) (24 September 1996)
- Council Directive 200 1/80/EC on Large Combustion Plants
- Council Directive 75/440/EEC on the quality required of surface water intended for the abstraction of drinking water (16 June 1975)
- Council Directive 98/83/EC on the quality of water intended for human consumption (3 November 1998) and Council Directive 80/778/EEC relating to the quality of water intended for human consumption
- Directive 2000/60/EC of the European Parliament and of the Council on the framework for Community action in the field of water (23 October 2000)







- Decision No 2455/2001/EC of the European Parliament and of the Council (20 November 2001) on the list of priority substances in the field of water policy and amending Directive 2000/60/EC
- Council Directive 80/68/EEC on the protection of groundwater against pollution caused by certain dangerous substances (17 December 1979)
- Council Directive 97/11/EC (3 March 1997) amending Directive 85/337/EEC on the assessment of the effects of certain public and private environmental projects.







5 Situation analysis of Inter-Municipal Cooperation in Georgia and in Adjaria

Georgia has just begun taking steps towards effective decentralisation. Given the intention to devolve some central authority competences to local self-governments, implementation of IMC is becoming increasingly relevant (Losaberidze, 2015). In the local government reform of 2006, the first level of self-government in Georgia (1,004 entities) was abolished, leaving 64 regional self-governments, widening the gap between citizens and government. The changes were justified by alleged ineffectiveness of small municipalities in delivering public services (even though sufficient financial resources had never been devolved to local self-governments). The average population size within a self-governing entity increased, from 4,350 to 68,050. However, this increase was not accompanied by any improvement in the quality of public service delivery (nor in per capita funding). Decrease in the competences of self-governments followed, with intense supervision, both formal and informal, by the central authorities, and most taxes were completely centralised. The subsequent decentralisation reform of 2012 envisaged the formation of comparatively smaller homogenous municipal entities with shared interests. Currently, there are 71 municipalities in Georgia.

IMC has rarely been used in the management of waste disposal in Georgia, with the only known example SWM in the city and surrounding community of Zugdidi, in Samegrelo-Zemo Svaneti. Another rare example of a successful IMC in Georgia was the creation of a joint stock water supply company, Achara Tskali Alliance (ATA), for water supply systems in Adjarian municipalities, with ownership dependent upon population size (with MoFE retaining 26% ownership), as follows: Batumi, 34%; Kobuleti, 17%; Khelvachauri, 11%; Khulo, 5%; Keda, 4%; Shuakhevi, 3%. ATA is governed by a supervisory board comprising representatives of the ministry (deciding vote) and of Batumi, 46%; Kobuleti, 22%; Khelvachauri, 15%; Khulo, 7%; Keda, 5%; Shuakhevi, 5%.

Other examples of IMC in Georgia have received support from donors—UNDP, USAID, EU, GTZ, OSGF—and have focused on local community perceptions of self-governments and their services. The EU-supported programme Georgian Applied Research Facility–Regional Development has published two sets of policy papers, with an intended paper on IMC yet to be published. Meanwhile, in 2013, Tskaltubo and Tkibuli municipalities in Imereti region implemented a project on the rehabilitation of road infrastructure through a proportional share of funding, and a similar project proposal was submitted in 2015 by the municipalities of Mtskheta and Dusheti in the Mtskheta–Mtianeti region.



5.1 Legal provisions on IMC organisations and procedures

Despite its general nature, a legal framework exists in Georgia that allows municipalities to actively engage in IMC. The process of harmonisation of the legislation within itself (commenced in September 2015) is ongoing. Revision of service procurement regulations in a unified system is required to enable municipalities to take decisions quickly, effectively and efficiently, along with the setting up of a common database and guidelines (determining the principles and mechanisms for municipal shares, developing IMC structures, and regulations for decision making) for the different types of IMC.

5.2 Examples of IMC in Georgia

According to the CoE IMC baseline assessment report (2015) there are outside of Tbilisi 1,060 municipal enterprises in Georgia, of which 821 are not-for-profit organisations, 220 are limited companies, ten a legal body of public law and nine, 'other'. The main areas of activity include preschool and extra-curricula activities (31%), culture (30%), communal services (16%) and social and health care (13%), with small numbers involved in transport, water provision, archives and information, tourism, planning, agriculture and environment.

Although mechanisms for IMC are only now being developed in Georgia, some self-governments are engaging in cooperation. Borjomi and Kareli, in separate regions of Georgia, aim to establish a shelter for homeless animals and a rabies prevention joint service (non-profit), while Telavi and Gurjaani (Kakheti) requested recommendations on similar matters from the Ministry of Regional Development and Infrastructure, who suggested the setting up of a public-private partnership (PPP).

Following the separation of previous self-governments into rural communities and cities there have been difficulties with financing. For instance, a swimming pool in Ambrolauri also serves the surrounding community even though it is maintained by the city budget alone, while pre-school and extra-school education in Gori fulfils the needs of neighbouring municipalities without them sharing the financial burden of maintaining the infrastructure.

Since the end of 2014, Regional Advisory Councils at the regional governors offices have provided another mechanism for cooperation between municipalities. The councils comprise local officials (gamgebeli, mayors, heads of council and their deputies) and the regional governors, and are responsible for reviewing development and planning issues and projects of regional importance.

Self-government associations may also have a role. The National Association of Local Authorities of Georgia, NALAG, brings together the Georgian municipalities.



5.3 Capacities for funding IMC on SWM

Overall, municipal funding in Adjaria is not matched with the responsibilities the local governments have, while their discretion in the use of funds is limited. A contributing factor to this situation is that between 2003 and 2012 taxes in Georgia were once again centralised, since when local tax and non-tax revenues have been distributed unequally, with the cities receiving more than two thirds of local revenues, and the municipalities restricted to attracting additional sources of funding from loans or grants.

In 2007, local incomes constituted half of the local budget, but in the following year, this figure dropped to 15 percent, while the share of own revenues of local budgets decreased from 30 percent in 2002 to 2.3 percent in 2010. Thus, the budgets the municipalities have for provision of services are unsustainable. Meanwhile, in 2006, salary payments accounted for, on average, eleven percent of local costs, rising in some cases to 45 percent.

Losaberidze (2015) reports that, in 2015, some 263 million GEL (⊕7 m) was spent on the activities of the 1,060 municipal enterprises mentioned above, including 260.5 million GEL (⊕6 m) from municipal budgets. Some 46,000 individuals were employed in these enterprises, with salaries accounting for 60 percent of the budget. Meanwhile, the distribution of funding from central government for local budgetary spending is unpredictable.









6 Stakeholder analysis of proposed SWM IMC

The various stakeholders involved in a possible SWM IMC are described below and involve interested and affected parties at the local and national level, including governmental institutions and grass-roots organisations.

6.1 Customers: households and businesses

The customers in the proposed SWM IMC are the residents of Keda, Shuakhevi and Khulo municipalities, local businesses, individuals disposing large quantities of waste and using services of new and existing dumpsites. All customers using the service are charged a tariff and are affected by tariff changes, by waste management efficiency, and in some cases by gate fees and transportation costs.

6.2 Local authorities

The mountain municipalities of Keda, Shuakhevi and Khulo are the three local authorities intending to share their resources within an IMC for SWM in their territories. There is no landfill on their territory and thus these municipalities are faced with paying for the cost of long-distance transport of waste to the landfills on the Black Sea coast. As mentioned above a new regional landfill is currently under construction, through a loan from EBRD, in the western outskirts of the village of Tsetskhlauri, 45 km north of Batumi.

6.3 Regional authorities

The government of Adjaria is responsible for waste management on Adjarian territory. The Supreme Council is the highest legislative body, and the Adjaria regional government is the executive branch. Adjaria has wide powers in the following fields: local investment policies, social security, education, culture and science, public health care, economy, agriculture, protection of natural resources and environmental security. The structure, powers and competences, and procedural regulations are governed by the Law on the Structure, Competences and Responsibilities, and Procedures of the Government of Autonomous Republic of Adjaria. The government consists of ministries and departments. Decisions on issues beyond the competence of ministries are made by government, which includes an Economic Development Board, responsible for planning and coordination of economic development policy and strategy, and a Priority Commission with the power to oversee the budgeting process, i.e. the development and implementation of budget priorities and programmes.



The new regional landfill currently under construction in Tsetskhlauri, financed by a €3m loan from EBRD, a grant of €4.7m from SIDA and €0.6m grant from the Early Transition Countries Fund and to be operated by Hygiena, owned fully by the Ministry of Finance and Economy, will have the capacity to recycle 75,000 tons of waste per month and should be completed in the summer 2017. The construction is part of the Adjaria Solid Waste Project that will serve for the final disposal of municipal solid waste generated by the towns of Kobuleti and Batumi.2

6.4 Donors and international consultants

Several international donor agencies are contributing towards improvement of Georgia's waste management system by supporting the national and regional governments and local NGOs.

As mentioned above, EBRD is financing the construction of a new sanitary landfill as part of the Adjaria Solid Waste Project that will serve for the final disposal of municipal solid waste generated by the towns of Kobuleti and Batumi.3 The client is Hygiena 2009 who will own and operate the landfill. The project cost is €8.3m including related technical cooperation, co-financed by €3m loan from EBRD, a grant of €4.7m from SIDA and €0.6m grant from the Early Transition Countries Fund.

EBRD is also financing the Georgia Solid Waste Management Project,4 extending a sovereign loan of €10m to the state for the benefit of Georgian municipalities for solid waste collection services.5 The project will finance the acquisition of some 140 new solid waste collection vehicles and 7,000 solid waste containers, and equipment, as well as support the municipalities in preparing SWM plans and implement stakeholder participation programmes. The project includes a local contribution for investment and technical assistance plus additional technical assistance to support project preparation and implementation.

In addition, the bank is financing the Kvemo Kartli Solid Waste Project (2014–2018). EBRD is considering extending a sovereign loan of up to €7m to be on-lent to five municipalities in the Kvemo Kartli region—Marneuli, Bolnisi, Dmanisi, Tetritskaro, Tsalka—and SWMC. The project will finance the construction of an EU-compliant regional sanitary landfill and relevant infrastructure in Marneuli Municipality.

SIDA supports the construction of waste disposal facilities and waste water treatment plants in Georgia in cooperation with the EBRD and the World Bank. SIDA also supports three

⁵ http://mdf.org.ge/?site-lang=en&site-path=news/&id=1655



² http://www.messenger.com.ge/issues/2056 march 3 2010/2056 ebrd.html

³ http://www.messenger.com.ge/issues/2056_march_3_2010/2056_ebrd.html

⁴ http://www.ebrd.com/news/2016/ebrd-helps-improve-solid-waste-management-in-georgia.html

environmental organisations in Georgian (Clean Up Georgia Consortium) working to increase understanding and to raise awareness about environmentally sustainable waste management among children and youths, as well as among politicians.

International City/County Management Association (ICMA) and CENN are implementing the programme Waste Management Technologies in Regions (WMTR)6 through USAID financial support from 2014–2018, targeting the regions of Kakheti and Adjaria. The programme supports central and local government authorities, local businesses and communities in designing and introducing an integrated waste management system (IWMS) for those two regions. The programme focuses on the following:

- designing and establishing an IWMS and improving the capacity of the public and private sectors
- strengthening the capacity and efficiency of recycling companies and improving the enabling environment
- developing a tariff policy in the waste sector
- raising public awareness of IWM and ensuring public participation in all aspects of the design and implementation of a modern waste management system.

Some of the activities being implemented in Adjaria include:

- clearing up informal waste disposal sites
- signing of a memorandum of understanding between Batumi and Golden, Colorado, USA to help establish an IWMS in Batumi and in Telavi, Kakheti
- a Municipal Waste Management Plan Development Guideline, helping municipalities (including Keda, Shuakhevi and Khulo) develop municipal development plans.⁷

6.5 Central authorities

The Georgian government is ultimately responsible to the population, and is guaranteeing loan for Tsetskhlauri landfill while the ministries of Regional Development and Infrastructure and Environment and Natural Resources Protection are responsible for SWM in the country.

6.6 Local organisations, NGOs and CSOs

Local NGOs, CSOs and other organisations receive support from the international community for implementation of environmental projects, including projects to do with waste..

⁷ Information was provided by the WMTR project representative







⁶ http://environment.cenn.org/waste-management/projects/waste-management-technologies-regions-wmtr/

The Caucasus Environmental NGO Network (CENN) and the above-mentioned Clean Up Georgia Consortium (sponsored by SIDA; see below) are working on waste management issues, including initiating clean-up actions in Khulo Municipality,8 actions to clean up other polluted areas, and awareness-raising campaigns. CENN also works at the policy level with decision-making bodies and central and local municipalities. Other NGOs also deal with waste management issues, carrying out assessments and policy analysis, and also contributing to awareness raising. Clean Up Georgia comprises Ecological Awareness and Waste Management (EAWM), Georgian Society of Nature Explorers (Orchis), and the Greens Movement of Georgia and Friends of the Earth, Georgia through a project financed by SIDA.

6.7 Enterprises

Hygiena Ltd, Batumi Sandasuptaveba Ltd and Global Supplier Ltd provide SWM services in Adjaria on behalf of the regional and local governments. In Adjaria, Hygiena is implementing the Adjaria Solid Waste Project and is responsible for EHS management and monitoring, HR policies/planning and implementation, OHS, cultural heritage, sub-contracting, resettlement and economic displacement in relation to closure of landfills and opening of landfill, supplier relations, reporting to MoFE. Meanwhile, Batumi Sandasuptaveba and Global Supplier are responsible for Provision of SWM services to Keda, Shuakhevi and Khulo municipalities.

6.8 Secondary stakeholders

Solid Waste Management Company (SWMC) Ltd was created in 2012. In 2014, the company developed a ten-year strategy and action plan for reform of the management of solid waste disposal, as a result of which the current 53 municipal landfills (with a total of 215 staff) will be replaced by a network of 8–10 new and modern sanitary landfills built to international standards. Under the law, SWMC is responsible for waste treatment within Georgia, apart from in Tbilisi and in Adjaria. Of the 53 landfills, 17 were closed between 2013 and 2016, while 28 have been renovated to function until the new sanitary landfills are in place and when in compliance with EU directives waste sorting and recycling will begin, probably in 2019.

The Waste Management Association of Georgia gathers the companies operating in the field of waste recycling and collection, as well as associated industries. The association was officially registered in 20159 with the aim of assisting coordination among waste management companies to

 $^{^9\} http://georgiatoday.ge/news/2289/Waste-Management-Association-for-Environmental- and-Economic-Development$



0

 $http://khulo.ge/index.php?m1=1\&lang=ge\&rf=news\&search_text=\%E1\%83\%9C\%E1\%83\%90\%E1\%83\%A0\%E1\%83\%96\%E1\%83\%94\%E1\%83\%94\%E1\%83\%94\%E1\%83\%94\%E1\%83\%91$

pursue the following goals: define development goals of the waste management system, establish close cooperation with decision-making bodies, assist waste separation and manufacture of local products out of recycled goods, and create a business-friendly environment.

KfW is supporting the implementation of several projects in Georgia. Integrated Solid Waste Management System Kutaisi (2015–2019) will install a new landfill serving the Imereti and the Racha-Lechkhumi and Kvemo Svaneti regions, while Integrated SWM System for Kakheti and Samegrelo-Zemo Svaneti regions (2016–2020) aims at construction of two new regional sanitary landfills in the target regions. The total investment is €8m (KfW, €0m loan and grant of €3m, with national government contributing €5m). In 2014, KfW and SWMC signed an agreement for a grant of €0.8m for a feasibility study carried out by Infrastruktur and Umwelt, Germany, who are undertaking SWM feasibility studies in different regions of Georgia.

The Dutch government has supported improvements to the old dumpsite at Borjomi and arrangements for a new sanitary landfill, implemented from 2014 to 2016.

The World Bank is Supporting SWM and wastewater infrastructure projects in Georgia, while UNDP and the GEF programme are supporting a reduction in greenhouse gas emissions in the country and exploring local resources of renewable energy.

Naturally, the Internet social networks, TV, radio, and newspapers provide a good means of communication among the various stakeholders.

The roles of the different stakeholders are reported in Table 6.

Table 6. Stakeholders in Adjaria SWM

Stakeholder	Areas of responsibility & comments in relation to project	Type of impact and interest
Customers: households and b	usinesses	
Residents of Keda, Shuakhevi and Khulo municipalities	Residents in areas receiving SWM services; pay for services	Affected by tariff changes, and by waste management efficiency
Local businesses	Pay for services and act according to contracts	Affected by tariff changes, and by waste management efficiency
Individuals disposing large quantities of waste and using services of new and existing dumpsites	Pay for services	Affected by tariff changes, by waste management efficiency, and in some cases by gate fees and transportation costs

Local authorities









Stakeholder	Areas of responsibility & comments in relation to project	Type of impact and interest
Keda, Shuakhevi and Khulo municipalities	Ensure solid waste services directly to customers, safe transportation to landfills	Infrastructure development and adaptation
		Waste management service, environmental conditions (risks and improvements), financial considerations
Regional authorities		
Adjaria regional government	Waste management on Adjarian territory; oversight for the process and encouraging cooperation among the different	Provision of advice, support and facilitating cooperation
	stakeholders	Waste management service, environmental conditions (risks and improvements), financial considerations
MoFE	Loan, owner of Hygiena Ltd	Tariffs and fees from landfill, improved health and environmental conditions
Donors and international con	nsultants	
EBRD	Loan for SWM in Adjaria	Adjaria Solid Waste Project
SIDA	Grant for SWM in Adjaria	Adjaria Solid Waste Project
Early Transition Countries Fund	Grant for SWM in Adjaria	Adjaria Solid Waste Project
SWECO	ESIA for landfills	Adjaria Solid Waste Project
Ecolcenter	ESIA for landfills	Adjaria Solid Waste Project
USAID	Supporting communities in design of IWMS (Batumi), municipal development plans in Keda, Shuakhevi and Khulo	WMTR programme for IWMS in Adjaria (and Kakheti)
ICMA	Supporting communities in design of IWMS (Batumi), municipal development plans in Keda, Shuakhevi and Khulo	WMTR programme for IWMS in Adjaria (and Kakheti)
Central authorities		
State of Georgia	Guaranteeing loan for Tsetskhlauri landfill	Ultimately responsible to population
Ministry of Regional Development and Infrastructure		SWM disposal in Georgia







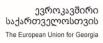
Stakeholder	Areas of responsibility & comments in relation to project	Type of impact and interest
Ministry of Environment and Natural Resources Protection		SWM disposal in Georgia
Local organisations, NGOs, O	CSOs	
Clean Up Georgia Consortium of EAWM, Orchis, and Greens Movement, Georgia and Friends of the Earth, Georgia	Consulted, has comments and remarks for SWM projects in Adjaria	SWM issues and clean-up actions in Khulo
Caucasus Environmental NGO Network, CENN	Consulted, has comments and remarks for SWM projects in Adjaria	SWM issues and clean-up actions in Khulo
Enterprises		
Hygiena	In Adjaria, EHS management and monitoring, HR policies/planning and implementation, OHS, cultural heritage, subcontracting, resettlement and economic displacement in relation to closure of landfills and opening of landfill, supplier relations, reporting to MoFE	Implementing Adjaria Solid Waste Project
Batumi Sandasuptaveba	Collection and removal of solid waste, street cleaning	Provision of SWM services to Keda, Shuakhevi and Khulo municipalities
Global Supplier	Collection and removal of solid waste, street cleaning	Provision of SWM services to Keda, Shuakhevi and Khulo municipalities
Secondary stakeholders		
Emergency services, fire brigade and local police	n.a.	Risk management
Local TV and newspapers	n.a.	Information disclosure, reporting on mismanagement
National TV and newspapers	n.a.	Information disclosure, reporting on mismanagement
Solid Waste Management Company (SWMC) Ltd	n.a. (responsible for strategy and action plan for reform of SWM in Georgia, though not in Tbilisi or Adjaria)	Implementing Georgia Solid Waste Project
Waste Management Association of Georgia	Establish and develop recycling methods, help with waste separation and manufacturing local products out of recycled goods, and create a business-friendly environment	
KfW	n.a.	Supporting several







Stakeholder	Areas of responsibility & comments in relation to project	Type of impact and interest
		projects in Georgia
Dutch government	n.a.	Supporting improvements to old dumpsites
Infrastruktur and Umwelt	n.a.	SWM feasibility studies in a few regions of Georgia
World Bank	n.a.	Supporting SWM and wastewater infrastructure projects in Georgia
UNDP (GEF)	n.a.	Supporting reduction of greenhouse gas emissions in Georgia and exploring local resources of renewable energy





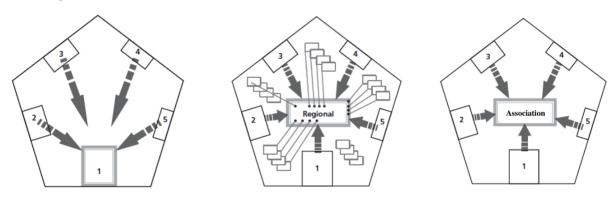


7 Alternatives to resolving the challenge of SWM in Adjaria

7.1 Institutional set up for cooperation scenarios

Managing solid waste in the very challenging situation in the mountainous municipalities of Keda, Shuakhevi and Khulo can be organised through various forms of cooperation between the local authorities involved and also the regional government of Adjaria. Four potential scenarios regarding institutional set up are outlined in the following paragraphs and represented in Figure 6.

Figure 6. SWM functions carried out by **a**) a single municipality, **b**) the regional government, and **c**) a municipal association, or **d**) an association between the municipal and regional governments. Note: the number of governments involved is shown as more than 3 and will allow for future membership of the IMC



Source: Dakoli Wilson (2011)

7.1.1 Delegation to one municipality to carry out joint waste management

Participating municipalities delegate the function to a selected municipality, which based on the discussion to-date could be Keda, the municipality that is the closest to the lowlands. In order to fulfil an extended waste management function, Keda Municipality will have to expand, or even create, a section within a department to undertake the assigned operation. The consortium of municipalities will have to decide how the waste management will be implemented, whether through the municipal staff, a municipal enterprise or contracting out the work to a third party. The staff managing the system will be the municipal staff of the selected municipality.

Considerations:

• Fewer administrative procedures are necessary to set up a structure within a selected municipality.



- The municipal structure will be more flexible to respond to immediate needs.
- The administration costs would be lower than in other scenarios, while the salary structure will be based on the one applied for municipal staff.
- Decisions will be concentrated in the hands of a single municipality with citizens of other municipalities—although paying for the service—not influencing the decision making.
- The present capacities of the municipal administrations means they are incapable of managing a larger undertaking than is already the case.
- Without strong management and leadership skills new structures that might be set up might slow down the procedures for acceptance of new members into the IMC arrangement.
- A controlling and monitoring system will have to be very well developed, outside of the usual municipal routine.
- The current salary scales used for municipal staff will be insufficiently competitive to attract well-qualified personnel.
- Staff may be predisposed to the interests represented by the mayor or council of the given municipality.
- The delegated municipality is unable legally to transfer funds from a grant to other municipalities.

7.1.2 Delegation of the SWM function to the regional government

The three municipalities will need to delegate their waste management tasks to the regional government. However, the government in Batumi will have to assign an appropriate executive structure for operating the joint waste management system for the mountain municipalities, or use any of the current structures undertaking activities similar in nature.

Currently, the Adjaria government is leading two key public service projects, one in the area of improving water and waste waster and the other in the construction of the regional landfill in Tsetskhlauri. Management of these projects, to be followed by further operation of the systems in place, is implemented with the involvement of two companies set up with the lead of the regional government.

Hygiena 2009 Ltd is set up and fully owned by the Adjarian Ministry of Finance for implementation of the Adjaria Solid Waste Project funded by EBRD and SIDA. It acts as the project implementation unit of the project, carrying out all assigned tasks to facilitate landfill construction and subsequent operation. The EBRD loan, guaranteed by the central government, is disbursed through Hygiena.

ATA, the joint stock water supply company for Adjarian municipalities referred to above has ownership dependent upon population size, with MoFE retaining 26%, as follows: Batumi, 34%;



Kobuleti, 17%; Khelvachauri, 11%; Khulo, 5%; Keda, 4%; Shuakhevi, 3%. ATA is governed by a supervisory board comprising of representatives of the ministry (deciding vote) and each of the participating municipalities.

Considerations:

- The role given to the regional government by the municipalities would strengthen the position of the regional government.
- Information flow and the process for new members joining the system could be facilitated.
- Regional policies on waste management could be coordinated more easily with the national policies.
- Regional government might have increased interest in subsidising the effort on SWM of the mountain municipalities.
- There is a lack of experience in the regional government of providing waste management services to inhabitants.
- Municipalities would be reluctant to delegate their functions further away from the citizens (subsidiary).
- A controlling and monitoring system for the management of a common system will have to be very well elaborated, outside of the regional government's usual routine.
- The salary scales of the regional administration are not competitive enough to attract well qualified personnel.
- Staff may be predisposed to the interests of the regional government and its leadership.
- Accountability towards municipalities that have delegated powers to the regional government might be inadequate given the strong position of the regional government in relation to the weak municipalities.
- Users of the system are not part of decisions made on the functioning of the system.

7.1.3 Setting up of an inter-municipal association

The cooperating municipalities set up a separate legal entity—a body with common competences—held responsible for the operation of the SWM system. The municipalities exercise their WM function through this entity, which carries out the assigned duties through its own executive staff. The general assembly and board, composed of the three member municipalities represented by sakrebulo members in proportion to the size of the population using the waste management system, will govern the entity. This entity can take several public or private legal forms.

Considerations:

• This option provides for a democratic decision-making process steered by a leadership elected by citizens who receive the service.



- Activities of the association are based upon its economic means and therefore strong analytical skills will have to be applied.
- The association will abide by all normal fiscal rules of the private sector, and should, therefore, provide a strong basis for sustainability.
- Similar examples from around the world are functioning well.
- The service delivery model best applies the principle of subsidiarity.
- Users of the system make decisions about the functioning of the system.
- If the private sector is involved, all private companies operating in the territory covered by the association will be encouraged to participate.
- Salaries can be more attractive than the municipal salaries, attracting managers and well-qualified staff.
- The separate entity, functioning according to private law regulations, is entitled to attract loans as well as private capital if necessary to upgrade the system.
- This association provides new and unfamiliar grounds for the Adjarian municipalities.
- The setting up of a separate legal entity involves high costs and administrative effort.
- A view of the potential tasks for the entity is currently limited.
- The objectives of the association will need to be clearly defined along with the roles of the entity and cost-recovery measures.

Since there is no limitation for IMC, any available form under public or private law can be considered an option. An analysis of not-for-profit organisations, private law companies and state enterprises follows later, with consideration given to the advantages and disadvantages of each. Self-governing units have several options to choose from, based on their needs and vision.

7.1.4 Setting up of an inter-municipal association with the regional government

The cooperating municipalities and Adjaria regional government, set up a separate legal entity—a body with common competences—held responsible for the operation of the SWM system. The municipalities exercise their WM function through this entity, which carries out the assigned duties through its own executive staff. Municipalities are represented in the governing structures according to population size with the regional government positioned with a decisive vote as in the case of the above-mentioned water management entity, ATA.

Considerations:

- This option provides for a democratic decision-making process steered by a leadership elected by citizens who receive the service.
- Activities of the association are based upon its economic means and therefore strong analytical skills will have to be applied.



- The association will abide by all normal fiscal rules of the private sector, and should, therefore, provide a strong basis for sustainability.
- Salaries can be more attractive than the municipal salaries, attracting managers and well-qualified staff.
- This association is set up on familiar grounds for the Adjarian municipalities and the regional government.
- Adjaria government might support the functioning of the SWM system for the mountain municipalities given that it represents the least developed area of the region and has the most expensive service delivery.
- The separate entity, functioning according to private law regulations, is entitled to attract loans as well as private capital if necessary to upgrade the system.
- The setting up of a separate legal entity involves high costs and administrative effort.
- A view of the potential tasks for the entity is currently limited.
- The objectives of the association will need to be clearly defined along with the roles of the entity and cost-recovery measures.

7.2 Objectives and scope of IMC

An analysis has been carried out regarding the situation of waste management in Keda, Shuakhevi and Khulo from the perspective that their IMC objectives and scope will be within own municipal functions and will provide a joint solution for functions gaining from scale of operation.

IMC objectives are part of municipal responsibilities stipulated by Law no. 2994, on the Waste Management Code, 2014, involving:

- municipal waste management, including elaboration of a municipal waste management plan, by December 31, 2017
- litter control and clean-up of littered area
- collection and treatment of municipal waste:
 - with a separate waste collection system
 - according to a government sub-law on collection and treatment,
 - where municipalities are entitled to create, implement and manage a joint municipal waste management system.
- Penalties for polluting a territory with sludge waste, burning non-hazardous waste, and violation of a company waste management plan
- Collection, transport, construction and operation of temporary storage facilities with a capacity of more than 50 ton (based on prior registration)

Municipal representatives have discussed the **potential benefits** and the **willingness** to cooperate regarding the municipal functions of waste planning, increasing service coverage, collection and



transportation of waste, including long-distance transport, recycling activities, collection of waste tariffs and raising public awareness.

There is scope identified for cooperation objectives in the areas of waste planning, long-distance transportation of waste and joint management of a transfer station to that end, as well as for public relations and awareness, and joint funding acquisition for waste management improvement.

The current view of the municipalities regarding waste collection and expanding the service coverage in the respective settlements is that individual municipalities will have to handle this separately. Progress with service coverage depends on road improvements introduced in each municipality. It is also suggested that municipalities can make use of small-scale tenders (or direct payment) for individuals to collect waste from places hard to access, especially during winter. This has been applied previously by the municipalities with some degree of success. Nevertheless, organising such waste collection from source will remain at the discretion of the municipalities. Recycling efforts are also regarded as activities that the municipalities and the IMC can reconsider at a more advanced stage of waste management.

The proposals stipulated above regarding the scope identified for IMC cooperation will need further technical scrutiny in order to analyse and demonstrate the potential financial and technical benefits for a larger scale operation within the IMC framework for the selected waste management activities. The CoE team is currently carrying out the design and analysis of various technical options for IMC in the waste sector, looking into respective advantages and disadvantages, also in comparison with the status quo. Recommendations from the technical and financial analysis will support the final decision of the municipal authorities in selecting the waste management functions to be delegated to the IMC.

7.3 Membership, coverage area and decision making

Keda, Shuakhevi and Khulo are the initiator municipalities that have identified the need to cooperate for resolving the waste management challenge in their mountain municipalities. These municipalities will be the main actors of the IMC and be involved, proportionally, in the decision making of the IMC based on their population size or waste generation, or both. The decision-making share would also correspond to their financial contributions for running the services offered by the IMC.

On the other hand, the membership base should take into account the technical recommendations for the coverage area of the IMC service. Such an area of coverage will be dependent upon meaningful waste management installations in the region, or in the proximity of the member municipalities. The optimal coverage area would also impact the membership base of the IMC, and



therefore the initiators need to make (statutory) provisions for accepting additional, new members. Such new member municipalities will be indispensable if they possess any waste facilities that cannot be operated efficiently for smaller scale communities.

Another factor influencing the membership base is associated with the financial and political support for the IMC. Such support would depend on the specific circumstances and, therefore, the potential support from the Adjaria regional government should be assessed and it probably offered participation into the IMC from the beginning, if the initiating municipalities would regard this as beneficial for support of the IMC and waste management in the mountain areas of the region. Negotiations on potential involvement of the Adjaria regional government from the beginning, as outlined in the fourth institutional set up scenario, should also take into account that currently the regional landfill being constructed will be managed and owned by the regional authority (through Hygiena 2009 Ltd.).

Recommendations from the technical and financial analysis that the CoE team is currently carrying out for different technical options will also provide advice regarding the possibility of including other counterparts, or even founding members, for the IMC. Upon final decision on IMC membership the decision-making bodies will be constituted accordingly, in order to provide for representation of all members, guided by the principle of subsidiarity and avoiding domination by a single member.

7.4 Potential Legal Form of Inter-municipal Association

The institutional set up for scenarios of cooperation outlined four possibilities for organising cooperation for SWM. The first two scenarios, which involve delegating authority to one of the participating municipalities (scenario 1) or the regional government (scenario 2), would be accommodated thorough an already existing structure within the institutional set up of the municipality or the regional government. Agreements are the instruments that can be used for delegating competences from the municipalities to the regional government but also among municipalities themselves.

The institutional set up scenarios that foresee setting up an association owned by all municipalities involved (scenario 3), or owned by the municipalities and the regional government (scenario 4), require setting up a stand-alone institution that would manage the SWM service on behalf of all participating municipalities. The municipalities and the regional government can register the IMC institution in various legal forms.

Experience from the legal forms chosen for stand-alone IMC entities shows a mixture of public enterprise, joint stock company and associations. A public enterprise and joint stock company are



the most commonly selected legal form of an IMC handling public services that include solid waste management, water supply and sewerage, thus providing conditions for private sector involvement and direct correlation with the service fees. A not-for-profit organisation (NPO) is the preferred legal form for joint development and coherent planning, administrative and development functions not directly related with service fees.

The following options of legal forms that the stand-alone IMC can take are elaborated in line with the possibilities of the Georgian legal framework. It is accompanied by a short explanation on the procedure that the municipalities need to carry out for registering an entity and also the advantages and disadvantages of the given legal form in performing the delegated municipal SWM function. Particular attention is paid to assessment of the possibility that each legal form offers in attracting private capital and receiving and managing loans or grants on behalf of municipalities.

7.4.1 Not-for-Profit Organisation (membership association, centre or foundation)

Procedure¹⁰

Self-government units draw up an agreement to jointly exercise a function, such as for the collection, removal and treatment of waste. With this agreement participating self-government units decide to establish a legal person, 11 separate from the participant parties, to whom they give the authority and responsibilities to exercise the functions. This legal person—subject to common responsibilities in this case—is an NPO.

¹⁰ The legal basis for the foundation of an NPO is the European Charter of Local Self-Government, article 10, 'the right for local municipalities association.' Paragraph 1 states: "The local municipalities have the right to collaborate while exercising their competencies and, according to the law, can be joined with other local municipalities in order to accomplish the duties of common interest." Meanwhile, the Local Self-Government Code (Organic Law of Georgia), no. 4087, article 21, "Right of municipalities to organise joint activities", says, under part 1, that: "municipalities may, according to this Law and other legislative and subordinate acts of Georgia, establish a legal entity under private law as provided for by this Law, or become partners/shareholders/founders of an entrepreneurial legal entity established by a municipality/municipalities, and members of a nonentrepreneurial (non-commercial) legal entity. In cases and in the manner provided for by the laws of Georgia, municipalities may set up a joint service." Part 2 states: "For the purpose of undertaking joint projects, a municipality may enter into an agreement with another municipality for merging budgetary funds." Part 3 states that: "The decisions stipulated by paragraphs 1 and 2 of this article shall be made by the executive body (bodies) of a municipality (municipalities), with the consent of the Sakrebulo(s) of the municipality (municipalities).

¹¹ The Local Self-Government Code, no. 4087, article 20, "Right of a municipality to establish a non-entrepreneurial (non-commercial) legal entity and to join that entity", says, under part 1, that: "A municipality may, for the coordination of its activities, establish a non-entrepreneurial (non-commercial) legal person and/or join that entity." Part 2 states: "A non-entrepreneurial (non-commercial) legal entity referred to in paragraph 1 of this article may organise joint activities within the powers of the municipality, take part, on behalf of the municipality, in preliminary discussions and consultations concerning draft laws relating to local selfgovernment, cooperate with public authorities and international unions (associations) of self-governing units, also establish relations with foreign unions (associations) and international organisations operating in the field of local self-government."









Considerations

The association can apply to donors operating in the field, thus accessing funding for NPOs. Consideration should be given on how to exploit this advantage in the present case, such as knowing how many potential donors operate in this area at any given time. Direct clients of the association will be its founding municipalities as will be, indirectly, the citizens of these municipalities. The association cannot offer services for higher than cost price to a private business or another self-government unit as the IMC is unable to legally justify a profit.

Loans are considered a good and functional means where further investments are required, for example during times of financial difficulty that may arise during the exercising of an association's activities. Under Georgian law it is not prohibited for an NPO or NGO to obtain a loan. Nevertheless, loan disbursement by the banks is mainly carried out through companies that can demonstrate a sound business plan, which goes hand in hand with legal forms in a commercial setting.

If any of the founding members of the NPO decides to leave the association in order to accomplish the function separately and independently, it cannot share any of the IMC assets despite having invested in securing them.

An NPO cannot be transformed into another kind of legal person—such as a commercial association—without first being liquidated. In such a situation and for the case being considered here the municipalities can decide how they will accomplish their legal functions through a different type of organisation (to which the assets of the original NPO can be transferred).

7.4.2 Private Law Company

Procedure

Under Georgian law, various types of legal entities can be established, including the following: Individual Entrepreneur (sole proprietorship), Solidarity Society (Solidary Liability Company, SLC), Commandant Society (Kommandit Partnership, KP; a limited commercial partnership), Limited Liability Company (LLC), Joint Stock Company (corporation) and Cooperative.

Under the current regulations, an Individual Entrepreneur is required to be registered at the national commercial and non-commercial (non-business) registry in order to form a sole proprietorship. In the case that any pre-registration business deals and transactions exist, the founders of a sole proprietorship, or those who acted in the name of the sole proprietorship, as solidary partners, are personally, wholly and directly, liable for all debts, losses and liabilities incurred from the deals and transactions in question. This liability is not waived by the registration.



An Individual Entrepreneur does not have the status of a legal commercial entity and acts in all deals and transactions and performs all the responsibilities as a natural person. For an LLC, the owners are liable only up to the amount of their capital contributions to the company's capital. An SLC, KP, LLC, JSC or Cooperative has the legal status of a legal commercial entity (a corporate body).

In the procedure for establishing a private law company, the municipalities set an agreement to jointly exercise the function of, in this case, the collection, removal or treatment of waste. In the agreement, participating municipalities decide on the creation of a legal person separate from the participating parties, to which they give authority and responsibilities to exercise the abovementioned functions. This legal person—subject to common responsibilities in this case—is established as one of the above-mentioned Private Law Companies.

Considerations

A Private Law Company has the possibility to apply for and receive loans from various private banks, to attract private investors in its activity if required, and to operate in the stock market by selling shares. This association can provide services for private businesses or non-member municipalities and can use its profits to increase service performance. If a founding municipality decides to leave the Company in order to exercise functions on its own, that municipality has the right to claim its part of the investment until the moment of its departure by selling its shares. The Private Law Company will be considered a profit-making legal person, and as such, will be subject to all provisions of the law and will be bound to pay all fiscal obligations as determined by the law.

7.4.3 State Enterprise

Procedure

Participating municipalities agree in an accord to exercise a specific function. This legal person—the subject of common responsibilities—is established as a State Enterprise.

Considerations

A State Enterprise has many characteristics in common with a Private Law Company, but also some differences. A State Enterprise is the property of the State, or property of the municipalities, and therefore cannot operate in the share market and obtain private capital.



If a state-owned enterprise or company is a for-profit business, for instance a state-owned LLC, it can accumulate its revenue profits to create reserves and funds for various purposes. An NPO is supposed to reinvest all of its profits back into its normal operations. As long as state-owned enterprises or companies, as well as the state, are publicly liable entities, all their relationships with the founders and financial or other deals and transactions must be made public.

Members of local self-governments are prohibited under the national public service law from having any alternative incomes. Thus, no public official or public servant can have an interest in a business. Thus if appointed to the management board of an LLC, a public official or public servant must resign from public service. However, the law does not prohibit a public official or public servant from being a member of a monitoring or supervisory board.

7.5 Financing prospects for IMC operation and sustainability

The CoE can provide start up funding of €45,000 for supporting the IMC SWM initiative. However, provisions for financial sustainability need careful consideration given the current limited resources of municipalities and miniscule contribution of waste fees to cost coverage. Increase in waste management service standards undoubtedly will entail an increase in associated costs.

Different financing mechanisms are appropriate for different IMCs, but in all cases the financing should cover the costs of IMC structures and products, with charges applied for IMC services that are fair for each IMC partner and for local citizens. The financing is also dependent upon the selected legal options, but in all cases the municipalities will have to associate the financial contribution with the population size or the respective amount of waste, or a combination of both. The agreement, or the statute, should incorporate the financial arrangements for covering all costs associated with the activity of the IMC, based on the budget that is prepared and approved by the decision-making structure of the IMC.

Currently, the municipalities are subsidising the waste collection and transportation and there is a reluctance in applying the waste charges in a systematic way for all waste generators, businesses included. In the long term, the municipalities need to apply cost covering and the polluter pays principle to setting and collecting the waste fees and also in absorbing the costs generated by the waste activities of the IMC.

Payment of tariffs requires a fundamental change in the mentality of a society and change is required in the mentality of the politicians in making decisions on an adequate scaling up of service standards along with respective tariffs.



8 Institutional set up of the proposed and selected cooperation alternatives (based on previous chapter)

- Definition of delegated function to be carried out by the IMC
- Institutional structure and key procedures
- Defined membership
- Proposed financial support allocations

The above issues will be finalised based upon the final decisions taken by the participating municipalities and the Adjaria government and upon this pre-feasibility study and the technical and financial analysis of the waste management scenarios elaborated by the waste experts.









9 Main findings and recommendations

9.1 Main findings

The three mountain municipalities of Keda, Shuakhevi and Khulo in the Autonomous Republic of Adjaria have shown their commitment to improving the management of solid waste in their territory. Their capacities, human and financial, are quite limited even when compared to the other municipalities in the region. The mountainous terrain creates a genuine challenge for waste management and makes it more costly than elsewhere, while the key disposal infrastructure in the region is being constructed not far from Batumi, the main waste generator in Adjaria, near to the Black Sea coast. The limited capacities and the efficiency of scale enable IMC to offer some possibilities to these mountain municipalities to use more efficiently their scarce resources by joining them and increasing the waste management service area.

The majority of the population in Adjaria lives in rural areas, where the population has been decreasing steadily, though slightly, over the past two decades. It is forecast that the population will continue to decrease slightly in the immediate future. Although this situation implies the challenge of SWM will decrease it in fact remains critical as only a very small part of the population in these municipalities is included in the service area. The collection rates of both the waste itself and the fees for its removal and disposal are very low.

Inter-municipal cooperation over SWM is seen as a good means to overcoming these challenges where the resources of Keda, Shuakhevi and Khulo municipalities are pooled. Four scenarios are presented, including: 1) Delegation to one municipality the task of carrying out joint waste management, 2) Delegation of the SWM function to the regional government, 3) Setting up of an inter-municipal association, or 4) Setting up of an inter-municipal association with the regional government. Legal options for the association that might be set up include: a), an NPO, b) a private law company, or c) a state enterprise, with procedures and considerations given for each.

IMC objectives are part of municipal responsibilities stipulated by Law no. 2994, on the Waste Management Code, 2014. Municipal representatives have discussed the potential benefits and the willingness to cooperate regarding the municipal functions of waste planning. Scope is identified for cooperation objectives in the areas of waste planning, long-distance transportation of waste and joint management of a transfer station to that end, as well as for public relations and awareness, and joint funding acquisition for waste management improvement. The proposals made for IMC cooperation will need further technical scrutiny in order to analyse and demonstrate the potential financial and technical benefits for a larger scale operation within the IMC framework for the selected waste management activities. Upon the final decision of the form of the IMC membership the decision-making bodies will be constituted accordingly, in order to provide for representation of



all members, guided by the principle of subsidiarity and avoiding domination by a single member. The CoE can provide start up funding of €45,000 for supporting the IMC SWM initiative. However, provisions for financial sustainability need careful consideration given the current limited resources of municipalities and miniscule contribution of waste fees to cost coverage. Increase in waste management service standards undoubtedly will entail an increase in associated costs.

9.2 Key recommendations

A set of key recommendations, listed in a suggested chronological order, set the basis for providing a sustainable solution to the SWM issues through IMC in the mountain municipalities of Adjaria, as follows:

Involve the municipal leadership into the discussion of the institutional, organisational, membership, financial and technical options proposed in the pre-feasibility study. The mayors, as well as the municipal council, will need to obtain complete information in order to put forward proposals and decisions required to move ahead with the IMC.

Generate support of the Adjaria regional government through information sharing and involvement in key discussions between the mountain municipalities. The regional government will need to provide input on the possibility of making available the regional landfill for the mountain municipalities (if feasible technically to deposit waste at the regional landfill through long-distance transport). Political support of the Adjaria government might provide a good basis for setting up a good IMC example in Georgia.

Carry out further technical and financial analysis that lays out and compares the technical options for improving the waste management service in the IMC area. This analysis should also point out the optimal extension of the service area in order to obtain the desired scale for proposed technical operations to be carried out by the IMC.

Support the municipal councils to take a decision on cooperating with the other municipalities in organising SWM jointly.

Provide the key elements of the statute of the IMC with the corresponding elements as agreed upon by the decision makers, and facilitate explanation of the statutory stipulation to the municipal council meetings, if necessary.

Ensure financial contributions are approved by the municipal councils and anticipated expenditures are well-founded and approved by the member representatives before going to the respective councils. In the meantime, a clear strategy on financial sustainability in providing the



waste service needs preparation and dissemination to all members, laying down the polluter pays principle and guiding municipal waste tariff policies towards a cost covering tariff level.

Lobby for further financial support for the SWM IMC to be set up in Adjaria. SWM is a costly service, in particular in mountainous areas with scattered inhabitants populated by a low-income population. Setting up the IMC needs to go hand in hand with acquiring funds to support the investment and operation in the short time-frame, since any waste disposal, temporary or permanent based on the technical analysis, will demand an investment unlikely to be matched with municipal capacities of Keda, Shuakhevi and Kulo. The CoE in cooperation with Adjaria regional government needs to explore the funding opportunities arising through the various initiatives active in the region, as well as potentials at the national level.

Encourage the IMC to cooperate with the private sector, looking also at the potential partnerships that may raise capital for upgrading the SWM system in the IMC area.

Prepare an activity plan for the IMC that in addition to activities that relate to the technical operation of the SWM objective, cover fund raising and public awareness activities in the SWM area, awareness raising regarding waste generation and commensurate payment of waste fees.

Install periodic reporting of the IMC towards is membership base and support proper organisation of decision-making structures.

Provide for continuous training and coaching of IMC staff, in close cooperation with other initiatives in the region, including here the cooperation with KfW for extending the waste and sewerage rehabilitated system into the mountain municipalities. Given the similar nature of the water company and its service, transfer of knowledge and skills should be facilitated.



The European Union for Georgia

10 References

- Dakoli Wilson, A. 2011. Beyond Administrative Borders—IMC in Albania. In: *Working together: Intermunicipal Cooperation in Five Central European Countries*, (ed. Paweł Swianiewicz). Local Government and Public Service Reform Initiative and Open Society Foundations, Budapest pp. 19–97
- Green Partners and WYG International. 2011. *Livelihood Restoration and Resettlement Framework* (*LRRF*). Solid Waste Management Project, Adjara Autonomous Republic, Georgia. 37 pp.
- ICMA and CENN. 2016. Cost-Benefit Analysis of Waste Management Strategies For the Adjaria AR and the Kakheti Region of Georgia. Waste Management Technologies in Regions, Georgia. USAID and CityLinks. 59 pp.
- Losaberidze, D. 2015. Mapping the Obstacles To Inter-Municipal Cooperation in Georgia. *In: Mapping the Obstacles To Inter-Municipal Cooperation in Eastern Partnership Countries*.
 Council of Europe. pp. 58–80
- Republic of Georgia. 2010. Constitutional Law of Georgia No 3710, No. 62 of 15 October 2010. 5.11.2010, Art. 379
- Rydergren, A. 2008. Feasibility Study and Project Preparation. Environmental and Social Impact Assessment (EIA)—Executive Summary. Adjara Solid Waste Management Project. 44 pp.
- Schaub, C. 2015. KfW's activities in Georgia with focus on municipal investments: Investment Opportunities for Georgian Municipalities within the framework of E5P. Frankfurt, March 2015.
- SWECO (2015a) *Stakeholder Engagement Plan (SEP)*. Ajara Solid Waste Management Project. Georgia, Ajara Autonomous Republic. April 2015. 32 pp.
- SWECO (2015b). Environmental and Social Impact Assessment (ESIA)—Autonomous Republic of Ajara, Georgia. Ajara Solid Waste Management Project. June 2015. 126 pp.







11 Annexes







a) Annex 1. Number of families and inhabitants, and installed infrastructure in the communities of Keda Municipality

Community	N	Village / Borough	Families	Inhabitants	Road from municipal centre to village (km)	Employed	Pensioners	Vulnerable	Type of farming	Schools	Kindergartens	Ambulatories, hospitals	ent	mmerc terpris		State, municipal entities	No. of beds	No. of overnight stays
	1	Mosiashvilebi	61	241	1.2	30	6	2	Н				<u>S</u>	m	<u>l</u>			
	2	Baladzeebi	32	149	1.4	15	44	22	Н			1	1					
	3	Gogiashvilebi	62	233	0.3	26	36	20	Н	1		1	1					
Dandalo	4	Takidzeebi	71	284	3.4	15	30	4	Н	1			1					
Dundaro	5	Dandalo	128	471	4	65	95	55	Н	1	1	2				1		
	6	Kharaula	208	994	5.2	90	108	59	Н	1	1	1	1			1		
	7	Djalabashvilebi	112	417	0.85	46	45	41	Н	1		1						
	8	Akho	175	851	3.4	42	84	50	V	2		1	4					
	9	Chetkidzeebi	54	244	3.4	8	60	38	F			1	3					
TD 11	10	Gegelidzeebi	109	492	2.7	36	69	31	T	1		1	1					
Tskhmorisi	11	Gobroneti	69	287	4.95	19	34	24	T			1						
	12	Kokotauri	151	663	2.8	38	86	51	T	1		1	2	1	1			
	13	Tskhmorisi	182	811	3.7	59	141	66	T	1	1	3	7	1		1		
	14	Tsoniarisi	156	772	5.5	62	80	31	Н	1	1	2	1					
Tsoniarisi	15	Tibeta-Kantauri	69	279	2.5	29	42	11	T									
1 SOMATISI	16	Vardjanisi	66	280	4.8	10	33	11	Н			1				1		
	17	Abuketa	96	421	5	32	56	34	Н			1						
Zvare	18	Zvare	46	201	1.9	23	29	16	F	1		1	4			1		
Zvare	19	Zesofeli	58	227	3.3	27	43	25	T			1						





	20	Vaio	117	514	1.5	59	73	42	V	1	1	1	2					
	21	Kvashta	66	298	4.5	24	91	35	Н	1		1						
	22	Sirabidzeebi	79	322	2.5	22	1	2	Н			1						
		Borough Keda	415	1,658	4	300	109	39		1	2	2	60	4	2	15	3	1
	23	Village Keda	58	287	0.8	46	121	62	V									
	24	Akutsa	91	394	4	50	51	30	Н	1		1						
	25	Gulebi	68	302	2	46	42	31	В			1						
	26	Zendidi	92	365	3.1	67	58	24	В									
Donovah Vada	27	Khunkuda	35	162	1.5	39	12	5	Н									
Borough Keda	28	Ortsva	72	291	4	63	50	20	Н	1		1						
	29	Arsenauli	24	111	1.5	25	8	2	Н									
	30	Dzentsmani	57	237	1.5	40	34	11	V	1		1						
	31	Shevaburi	29	103	3	8	19	11	Н									
	32	Koromkheti	49	218	2	31	25	13	Н									
	33	Tskhemna	36	158	1	32	25	13	Н				1	1				
	34	Pirveli Maisi	143	652	3.2	62	96	40	V	1	1	2	4			1		
Pirveli Maisi	35	Kolotauri	135	535	2.4	64	80	43	Н	1		1						
	36	Agara	70	290	5.3	23	39	19	Н	1		1						
	37	Zunadaga	89	293	3.1	50	46	16	В	1	1	1				1		
	38	Zeda Makhuntseti	84	301	2.4	40	2	0	В			1						
	39	Kveda Makhuntseti	104	392	1.2	60	103	40	Н	1	1	2	11		1	1		
	40	Kveda Bzvabzu	77	303	1.8	33	40	15	В			1						
	41	Zeda Bzvabzu	83	353	6.3	28	55	30	В	1								
Makhuntseti	42	Namlisevi	47	166	7.5	10	19	12	Н			1						
Maknuntseti	43	Kosopeli	28	75	1.5	5	17	10	Н									
	44	Uchkhiti	82	341	7.9	27	52	26	Н	1		1						
	45	Milisi	54	164	2	11	27	11	Н		1	1						
	46	Dologani	116	369	1	30	78	21	Н	1	1	1	3			1		
	47	Tcalakhmela	44	155	1.7	8	30	7	Н									
	48	Tcinkadzeebi	61	224	4.5	15	10	8	Н			1						
01.4	49	Oktomberi	64	270	6.5	33	66	42	V	1	1	1	2			1		
Oktomberi	50	Kutcula	60	235	5	13	4	2	В			1				1		





ევროპის საბჭო

	- 00															
	60	Inasharidzeebi	72	278	3	17	31	19	L	1						
	59	Namonastrevi	22	91	17	1	16	6	L							
	58	Silibauri	34	146	2.5	16	16	7	L			1				
Merisi	57	Gundauri	63	273	5.6	24	35	21	L							
	56	Garetke	28	130	3	11	13	8	L							
	55	Sikhalidzeebi	53	149	2	18	42	21	L			1				
	54	Merisi	101	422	10	63	68	31	L	1	1	1	3		1	
	53	Goginidzeebi	40	107	5.5	13	40	15	L			1				
	52	Agota	41	154	7.2	13	2	0	L							
	51	Medzibna	57	206	7.2	17	49	27	L	1		1				

^{*,} B, Beekeeping; F, Fisheries; H, Horticulture; L, Livestock; T, Tobacco; V, Viticulture





ევროპის საბჭო

b) Annex 2. Number of families and inhabitants, and installed infrastructure in the communities of Shuakhevi Municipality

Community	N	Village / Borough	Families	Inhabitants	Employed	Pensioners	Vulnerable	Type of farming*	Road from municipal centre to village (km)	Schools	Kindergartens	Ambulatories, hospitals	e	commerci enterprise		State, municipal entities	No. of beds	No. of overnight stays
		Borough											S	m	ı			
		Shuakhevi	291	924	289	205	28	L, C	0	1	1	1	43		1	24	4	1
	1	Beselashvilebi	34	142	10	21	6	L, C	3			1				1		
	2	Gundauri	38	51	6	9	3	L, C	8									
Shuakhevi	3	Dabadzveli	43	173	36	78	6	L, C	4	1		1				1		
Siluakilevi	4	Ternali	27	75	4	30	5	L, C	11									
	5	Kldisubani	9	30	5	1	0	L, C	4									
	6	Okropilauri	38	121	45	17	6	L, C	4									
	7	Skhephi	55	159	25	49	6	L, C	8	1		1				1		
	8	Chanchkhalo	181	525	63	109	13	L, C	6.5	1		1	1			1		
	9	Zamleti	63	263	19	35	7	L	8			1	1			1		
	10	Bututauli	149	592	45	103	23	L	7	1						1		
Zamleti	11	Momtsvari	13	61	2	6	3	L, C	19									
Zamen	12	Mchedluri	63	249	16	38	8	L, C	16							1		
	13	Nenia	222	997	52	167	27	L, C	5	1			1			1		
	14	Nigazeuli	235	987	78	156	21	L, C	13	1	1		2			1		





	15 Photeluri	53	153	26	73	21 L, C	17					
	16 Phurtio	264	924	30	135	42 L, C	15	1	1	1	1	1
	17 Samoleti	23	67	22	29	3 L	6			1	2	1
	18 Gogadzeebi	103	275	28	53	9 L	15	1		1		1
	19 Kviriauli	41	138	17	21	2 L, V	5			1	2	1
	20 Laklaketi	83	286	32	60	9 L	9				1	1
Uchamba	21 Mophrineti	47	146	24	30	3 L	8	1	1			
	22 Tbeti	104	324	39	97	5 L	12	1		1	2	1
	23 Tsinareti	85	271	22	57	4 L	11	1		1	1	1
	24 Tsablana	104	387	32	78	12 L	12			1	2	1
	25 Djabnidzeebi	194	701	66	153	25 L	10	1		1	2	1
	26 Baratauli	130	501	49	76	17 L, C	19	1	1	1	1	1
	27 Gomarduli	128	474	24	85	15 L, C	21			1	1	1
	28 Vani	65	186	16	28	6 L, C	23			1		1
Baratauli	29 Zemokhevi	65	221	20	35	9 L, C	15			1		1
	30 Tsenteradzeebi	20	82	1	15	5 L, C	18					
	31 Tsankalauri	25	69	0	3	0 L, C	8					
	32 Djvari	16	66	3	10	4 L, C	20					
	33 Tchvana	121	367	67	100	9 L	12	1	1	1	3	1
	34 Akhaldaba	151	531	46	112	6 L	12	1		1	1	1
	35 Vardjanauli	44	148	9	38	4 L	7					1
	36 Zedaqana	52	217	6	59	3 L	8					
Tchvana	37 Takudzeebi	109	430	12	120	7 L	8			1		1
	38 Tsekva	43	145	9	30	2 L	17					
	39 Tsivadzeebi	86	347	3	22	9 L	9					
	40 Tskhemlisi	77	229	21	60	13 L	14			1	1	1
	41 Tcqarota	133	509	52	89	30 L	19	1		1		1





	42 Tcala	158	586	54	116	15	L	17	1		1	1	1
	43 Khitcauri	103	349	51	2	1	L	7	1		1	10	2
	44 Shubani	70	290	32	40	9	L	28	1	1	1	3	1
	45 Darchdzeebi	96	406	43	61	17	L	31	1		1	5	2
	46 Iakobauri	36	142	11	16	8	L	27				4	1
Shubani	47 Kobalta	59	203	28	41	9	L	33			1	3	1
	48 Tomasheti	45	224	23	30	6	L	30			1	3	1
	49 Kutauri	6	34	2	6	1	L	32				1	
	50 Tselati	25	114	8	5	3	L	33				2	1
	51 Jhanviri	45	223	17	22	4	L, C	23			1		1
	52 Brili	94	384	31	59	6	L, C	20	1		1	1	1
Talzalaaaani	53 Intskirveti	70	306	24	45	5	L, C	30	1		1	1	1
Tskalsaqari	54 Naghvarevi	80	280	31	35	10	L, C	34	1		1	1	1
	55 Photaro	0	0	0	0	0		0					
	56 Khabelashvilebi	76	388	35	56	11	L, C	18	1		1	2	1
	57 Dghvani	75	553	40	89	7	L, C	12	1		1	1	1
	58 Goginauri	79	303	30	40	89	L, C	16.5	1				1
Dghvani	59 Kviakhidzeebi	48	205	24	30	61	L, C	18.5	1				1
	60 Lomanauri	59	186	22	24	60	L, C	13.5	1				1
	61 Kidzinidzeebi	139	545	43	22	36	L, C	12	1				1
	62 Oladauri	93	275	36	74	6	L, C	18	1		1	2	1
	63 Gori	49	212	13	31	5	L, C	20				1	1
	64 Karapeti	49	232	18	39	6	L, C	26	1				1
Oladauri	65 Matsqvalta	85	321	32	68	7	L, C	24	1				1
	66 Makhalakidzeebi	125	433	62	80	14	L, C	21	1	1			1
	67 Paposhvilebi	42	128	26	17	3	L, C	16					1
	68 Djumushauri	39	125	8	10	2	L, C	17					1





*, L, livestock; C, crop production; V, Viticulture







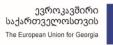
c) Annex 3. Number of families and inhabitants, and installed infrastructure in the communities of Khulo Municipality

Community	N	Village / Borough	Family	Inhabitants	Roads to villages and between villages (km)	Schools	Kindergartens	Ambulatories,	hosnitals	Com	merci al prises m l	State, municipal	No. of overnight stays
	1	Riketi	136	513	15	1	1		1	5		1	
	2	Danisparauli	150	588	2	1	1			2			
Riketi	3	Shuasopeli	41	167	3								
	4	Didi Riketi	90	378	4	1				2			
	5	Bodzauri	150	593	4	1				3			
	6	Dioknisi	112	369	10	1	1		1	2	1	1	
	7	Tabakhmela	81	216	5	1				2			
	8	Djvariketi	37	150	2.5								
	9	Maniaketi	101	319	4.5	1							
		Begleti	212	692	7	1				2			
Dioknisi		Kortokhi	155	546	10	1	1			1			
210111101	12		145	425	3	1				3			
		Galadzeebi	119	367	8.5	1							
		Ghurta	76	216	4	1	1						
	15	Lakobadzeebi	113	341	8					1			
	16	Ghordjomeladzee bi	78	228	6								
	17	Ghordjomi	32	112	20	1	1		1	8		1	
	18	Muntadzeebi	56	192	1.5					1			
	19	Adadzeebi	56	186	0.5								
	20	Gorgadzeebi	97	432	2	1				3			
		Mekeidzeebi	39	154	4	1	1						
	22	Vanadzeebi	72	268	2					1			
		Vashakmadzeebi	35	136	3					2			
Ghordjomi		Mekhalashvilebi	54	248	4								
		Tunadzeebi	73	337	2.5	1				3			
		Kurduli	40	183	4								
		Akali Ubani	20	72	6								
		Stephanashvilebi	40	155	1					1			
		Tsintskalashvilebi	62	225	2					3			
		Merchkheti	39	184	5								
	31	Tchakhauri	54	223	5								





	32	Labaidzeebi	58	288	2.5				1	
Agara	33	Agara	232	875	15	1		1	3	
	34	Satsikhuri	94	379	12	1	1		1	1
Satsikhuri	35	Namonastrevi	85	310	3					
Satsikiiuii	36	Gelaura	85	321	5	1			1	
	37	Pantnari	67	261	4.5	1				
	38	Didadjara	365	1830	9	1	1	1	4	
Didadjara	39	Iremadzeebi	82	330	2	1			1	
Didadjara	40	Boghauri	80	278	3.5					
	41	Gobadzeebi	36	133	2					
	42	Dekanashvilebi	207	672	0.5			1	3	3
	43	Zeda Dekanashvilebi	60	190	3					
	44	Qedlebi	260	710	5	1	1			
	45	Tkhiladziri	185	605	2.5				1	
	46	Ganakhleba	190	562	4	1				
D.1 . 1 . 1	47	Elelidzeebi	53	170	4					
Dekanashvile	48	Dzirkvadzeebi	164	517	11	1			1	
bi	49	Okruashvilebi	159	560	3	1	1		2	
	50	Diakonidzeebi	119	398	6	1			2	
	51	Godgadzeebi	46	216	7					
	52	Uchkho	119	396	7	1	1		3	
	53	Gudaskho	61	231	8.5				1	
	54	Duadzeebi	169	561	3.5				1	
	55	Kurtskhali	23	89	10.5					
	56	Kvemo Vashlovani	440	1264	5	1	1		3	1
	57	Zemo Vashlovani	162	506	3	1		1	2	
Vashlovani	58	Shurmuli	142	394	6					
	59	Skhandara	13	53	3.5					
	60	Chao	84	296	4.5	1			2	
	61	Tago	105	348	6	1			2	
	62	Khinchauri	67	305	15	1	1	1	4	1
	63	Tcheri	48	212	2.5					
	64	Dzmagula	54	246	7.0	1				
Clabalta	65	Gurdzauli	31	123	2.0					
Skhalta	66	Phathckha	136	632	3.0	1	1			
	67	Tsablana	126	631	4.5	1			2	
	68	Tsabliani (Qishla)	83	404	5.0	1				
	69	Kvatia	82	417	8.0	1	1		2	
	70	Pushrukauli	70	326	25	1		1	3	
Duchmilzoni	71	Rakvta	88	424	7	1			1	
Pushrukauli	72	Vernebi	75	348	2.5	1	1		2	
	73	Oshanakhevi	20	93	4.5				1	







							154	_	59	35	-
	401	1,100		1	1	2	49		49	35	3
Mtisubani	50	198	2	1			1				
Bako	107	368	2	1							
Kvemo Tkhilvana	137	602	1.5	1			1				
Zemo Tkhilvana	145	537	45	1	1	1	2				
Nadaburi	35	136	1.7				1				
Kalota	95	352	3	1			1				
Skvana	106	360	3	1			1				
Akhalsheni	44	138	2.5								
Khikhadziri	182	609	40	1	1	1	4		1		
Makhalakuri	37	132	3								
K	hikhadziri	hikhadziri 182	hikhadziri 182 609	hikhadziri 182 609 40	hikhadziri 182 609 40 1	hikhadziri 182 609 40 1 1	hikhadziri 182 609 40 1 1 1	hikhadziri 182 609 40 1 1 1 4	hikhadziri 182 609 40 1 1 1 4	hikhadziri 182 609 40 1 1 1 4 1	hikhadziri 182 609 40 1 1 1 4 1







d) Annex 4. Expenditures on solid waste management (GEL)

Year	Municipality	Amount	Cleaning service	Waste removal	Materials, equipment
2015	Khulo	119,597	47,097	71,700	800
	Shuakhevi	125,000	93,220	31,780	0
	Keda	181,941	84,250	25,550	72,141
	Khulo	451,738	41,968	55,770	354,000
2016	Shuakhevi	110,000	74,000	36,000	0
	Keda	118,800	76,910	34,890	7,000
	Khulo	133,992	49,992	84,000	0
2017	Shuakhevi	90,000	54,000	36,000	0
	Keda	111,800	83,146	28,654	0





